The Journal of the American Medical Association

Published Under the Auspices of the Board of Trustees

VOL. 74, NO. 2 CHICAGO, ILLINOIS JANUARY 10, 1920

THE PATIENT HIMSELF *

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CHICAGO

Among the vices of advancing years are carping criticism, garrulity and needless admonition. To all of these I plead guilty and so can only beg your indulgence while I say a few things that I think should be said, knowing that I say them poorly and that I add nothing to our store of knowledge.

My theme is that much neglected individual, the patient himself. Concerning his organs and their functions, we have numberless tomes. Concerning the diseases that attack his parts, we have whole libraries. Concerning the various ways of cutting him open and sewing him up, there are several six-foot shelves. For the manifold instruments, machines and appliances of our armamentarium, an extensive congeries of industries is in constant operation. Indeed, some of us are so used to practicing medicine by machinery that the cortical cell bids fair to shrink into sterile desuetude. But of the patient himself — the man, the woman, the child — relatively little is thought or written.

THE PATIENT ABOVE THE EYEBROWS

What do I mean by the patient himself? I mean what we mean when we speak of our friend, our enemy, our son, our daughter. We like a man because he is sensible, kind or entertaining; dislike him because he is selfish, irritable or pessimistic. So do we admire or despise because of certain mental, not physical, qualities: traits that reside above the eyebrows. Our attitude depends on the individual's personality: the biggest thing to us and to him. It is more important than his kidneys and his liver, and its disorders are as momentous to him and to society as is disease of his organs. His personality is what he is — the man himself; and he is the sum of all his tendencies and experiences; his desires, aversions, affections, hates, passions, inhibitions, appetites, reflections and knowledge. The tendencies are few and simple, the experiences myriad. And a little thought shows that most of this experience has been in the form of conflicts. From the beginning, life is a conflict: an effort to live and be happy — that is to say, an effort to adapt ourselves to the conditions under which we must live. The struggle between what we consciously or unconsciously wish to do, and what the present state of society requires us to do begins in infancy and never stops. Very early the normal child learns that certain perfectly natural functions may not be fulfilled in a completely natural way. He may not urinate in the parlor nor appropriate anything he happens to see. As we grow older these conflicts become more complex and more acute. Some of us come out of them pretty much to the satisfaction of ourselves and our neighbors. We are the happy, the well and the successful. Some of us are unable to make the adjustment. We, then, are the unhappy, the ill or the unsuccessful. Now, as every one of us has these conflicts and has them all the time, it does not take much perspicacity to see that there are many defeats. Occasionally one comes out of the conflict a thief, a tramp, a pauper, an invalid. Perhaps one does not think of petty larceny, constipation and eye strain in the same terms; but they may be equally due to social inadaptability. Each is the reaction to a difficult situation.

THE RESULTS OF MALADAPTATION

The whole question of health is one of adaptation or adaptability. We have typhoid fever either because individually we are still vulnerable to the typhoid germ, or because as a community we have failed successfully to combat it. Some of us have neuroses or psychoses because we are unable successfully to harmonize with our environment — *and for no other reason.* Often this fact is overlooked. What has social inadequacy to do with the practice of medicine? A great deal, because it starts a multiplicity of symptoms which the patient expects the physician to relieve. To speak of the hyperacidity and gastric distress of financial insufficiency, the dysmenorrhea of domestic disharmony and the tachycardia of industrial futility may sound incongruous, but sometimes that is what they are.

An easy approach to consideration of the neuroses as a result of maladaptation, that is to say, as the outcome of a conflict, is by way of the war neuroses because there the conflict is so apparent. A war neurosis, grossly miscalled shell shock, is a means of, let us say, getting out of the front line trenches. The soldier can no longer stand the bursting shells, the falling parapets, the horrible sights and the imminent danger of death. But army discipline and morale, personal honor, pride, ideals make running away impossible. A neurosis makes it possible. So does loss of an arm. If he loses an arm, the soldier doesn't have a neurosis. A neurosis is no fun, but it is a great deal better than the trenches.

Peace neuroses are just the same. They are a way out of trouble or around an obstacle; a way selected more or less unconsciously. If one cannot remove an obstacle from his path and cannot surmount it,

* Presidential address, read before the Institute of Medicine of Chicago.

he goes around. Perhaps he *can* push it away, or *can* surmount it; but he *prefers* to go around. For our patients, the way around is often insomnia, "nervous breakdown," backache, dysmenorrhea, asthenopia, indigestion, headache, abdominal pain, dyspareunia, impotence, exhaustion, palpitation and many other things for which medicines are given and operations performed.

As already indicated, a neurosis is by no means the only avenue of escape from an intolerable or uncomfortable situation. Some ways are much simpler. The man who, when tired of his job and dissatisfied with his wife, stops work, gets drunk and beats up his connubial partner, does not develop a neurosis from those particular troubles. He doesn't have to. But he is just the one to get a lame back or sore feet in the army, where he can't escape by the simpler way.

An intelligent and pleasing woman was dissatisfied with her town and her husband. She referred to the former as "a piffling little place," and said of the latter, "He gives me no satisfaction." What was the solution? Recently she spent four months in New York, and with bright eyes and a pleased smile said, "You bet I had satisfaction there." Last winter she visited Los Angeles with the same gratification. Did she have a neurosis? Why should she? There was absolutely no conflict. She was as simple and direct as a child.

Contrast the following:

A woman of 34 years complained of daily headache, poor sleep, ready exhaustion, some dyspnea on exertion, poor appetite and constipation. With considerable pains, I ascertained that she too was dissatisfied with her husband and with her social and financial position. She could not adjust herself to conditions as they were, and she could not change them. Her ideals and training did not allow the simple means of escape adopted by the other. Instead of deliberately going to New York and California, she subconsciously went to headache and insomnia.

NEUROSIS AS DEFENSE REACTION

In short, the neurotic is an individual in trouble with no easy and direct means of escape. A neurosis is a defense reaction, a means of escape; a psychologic dugout in which to hide. That the difficulty may be imaginary, the patient fleeing from a ghost, does not alter the situation. His efforts to adjust his appetites and desires to the demands of convention, society, the herd are the same as ours. He attempts to dodge defeat and to shift responsibility for lack of success as do we whom a lenient society calls normal. Because he played so poorly, an irascible golfer first threw his bag of clubs and then his caddie into the creek. Very, very often the nervously inadequate person unconsciously shifts the responsibility to some bodily trouble, when he naturally comes into the physician's domain. And too, too often the physician takes his complaint at its face value. Sometimes the literalness of physicians is equal to that of religious fanatics. Once I examined a justly celebrated clergyman who was in a state of profound delusional melancholia, in consequence of which he falsely accused himself of sundry grave sins. Having recovered, he was tried by a church tribunal and dismissed from the ministry because of these self accusations of a disordered mind. Such superficiality and narrowness makes a physician smile. But compare the following:

A young man brought to me his wife, who at various medical hands had received sundry powders and potions for insomnia, nervousness and loss of appetite. After a bit of questioning, I sent the husband on an errand. As the door closed behind him I said, "Now, quick, tell me what's the matter." The startled wife then told me that their young priest, a close friend of the husband, was almost daily assailing her virtue, and that she was quite distracted between fear that she might yield and fear to tell her husband.

And the following:

A woman of 50 years was having a prolonged rest cure because of general nervousness, mental depression, "exhaustion," and insomnia. She appeared to be very weak, and walked across the room with difficulty. A bit of direct questioning revealed that she was intensely afraid of a stroke, and that this fear was based on tinnitus, which she expressed as a "noise in the head." This to her meant cerebral calamity: a stroke, paralysis, death. When the simple situation was explained to her she got up and went to the coast of Maine for a holiday.

Would these medical examples make an ecclesiastic smile? The following incident is not unusual:

Many years ago, only with uncomfortable persistence did I dissuade a well-known surgeon (since deceased) from performing a gastro-enterostomy on his wife. He insisted that she never could be well until operated on. But I knew of grave emotional stress of which he was partly ignorant and which he partly ignored. With the mental adjustment which came about in a couple of years, all abdominal symptoms disappeared, and she has continued well.

How many of us constantly keep in mind that we, the acme of civilization and culture, have every instinct and passion of the caveman? Are we always alert for the ever present emotional-ideational-intellectual conflict? And do we recognize its importance? To repeat: The product of these conflicts is WE — the patient himself. And in the vast and intricate complexity of modern life, the name of the conflicts is legion. Neurotics are just as different as physicians, and for as many different reasons. Consequently, investigation in many directions is necessary. Here laziness, carelessness and false modesty on the part of the physician have no place. I should not like to say, even if I knew, how often to my question "Did you tell all this to all these other doctors?" the reply has been "No, they didn't ask me."

THE SEXUAL ELEMENT

And here I venture a direct word on sex matters. Without following the self-styled psychanalysts in tracing practically all psychoneuroses to a sexual origin, without even discussing their tenets, I wish definitely to state that something relating to matters sexual has a great deal to do with starting many nervous disorders. Aside from the demonstration of experience, a little reflection will show that this is reasonable. In the present state of society, practically every individual between early childhood and presenility has sexual problems and conflicts. In the solution of the problems and disposition of the conflicts, generally he has the assistance of neither publicity nor knowledge. On the contrary, he is handicapped by ignorance, superstition and isolation. All the conditions are there for the development of fear, shame, remorse, guilt, resentment, a feeling of inadequacy or impotence; the most painful emotions, plus secretiveness. Who would not escape from them by way of a neurosis, very distressing but with none of the tragedy of the other forms of suffering? Thousands of soldiers escaped from the shell torn trenches, that is, from their intolerable

emotions, by way of a psychoneurosis. Millions of us have tried to escape from other tearing emotions by means of so-called functional nervous disorders. Hence, whatever our decision as to the psychology of sex, in the case of the individual patient there is but one answer: sufficient investigation, proper instruction, and counsel based on adequate understanding.

But I do venture to add that, in my opinion, to express love of power, money and ease; fear of pain and death; the satisfaction of food, delights of the eye and ear; the disappointment of failure, the pleasure of work well done, all in terms of sex—howsoever sublimated — is to express a narrow conception of *Homo sapiens*. And I also believe that in the vast majority of cases, the exhaustive and intricate corkscrewing methods of the freudians are unnecessary. Sometimes they are harmful.

DIAGNOSES THAT FALL SHORT

Our medical affinity seems to be the concrete and tangible. Organic abnormality is the most facile explanation of disorder. Given almost any complaint, if the patient reveals undoubted organic disease, our tendency is to stop there. When shall we learn that a prolapsed kidney or stomach may be as good as normal, a valvular lesion innocuous, a urethral stricture of small importance, a deviated septum symptomless, and a torn cervix not even a cosmetic offense? But prolonged fear, disappointment, resentment, anxiety, regret, perplexity are never symptomless. The physician's wife, mentioned above, undoubtedly had enteroptosis; but that did not cause the trouble. The following is a common type:

> A middle-aged woman had been operated on for ruptured perineum, rectocele, and "ulcer of the womb"; later, for hemorrhoids and laceration of the cervix. Still later, she had a curettage, and then the ovaries and tubes were taken out. Finally a hernia, a relic of one of the previous operations, was repaired.

No very exhaustive investigation was required to show that this patient never had been physically disabled, but that she always had been intellectually and temperamentally absolutely unequal to life's demands. Each operation was only an additional urge into physical invalidism as an escape from the toil and responsibilities that fell to her lot. That such treatment tends to perpetuate the trouble is obvious. If dysmenorrhea and pelvic pain are really a recourse from laborious housekeeping, ventrifixation fixes the mental attitude of the patient. And the next operation for adhesions makes her more adherent to her disability.

When a woman dates her symptoms from marriage or childbirth, it behooves the physician to look for the presence of discontent, unhappiness and fear. A diagnosis of pelvic disease may have to be changed to mother-in-law, which often means a more or less inadequate daughter-in-law. When a man is disabled by an organic disease or abnormality that apparently doesn't measure up to the disability, one should take the precaution to look for the neurosis which really makes the trouble. A simple arthritis, with which some people would happily limp through life, makes others useless. Why? Because there is something back of the arthritis; something the matter with the patient himself. While the clinical picture may be made up of symptoms strictly organic plus others purely functional, the latter may be by far the more important, even though the former are more salient.

EFFECTS OF FEAR

Elsewhere,[1] I have tried to emphasize the importance of recognizing fear. One might think that if a patient were afraid he would know it and tell of it. Neither may be the case. That one may be sick from fear and not be aware that he is afraid is certainly true. And "to deny fear seems to be almost as instinctive as that emotion itself."[1] That is to say, the physician must not wait for the avowal: he must dig it out. This is especially true of that exceedingly common apprehension, the fear of "losing the mind." Patients will carry this fear for years and never mention it. A very common way of consciously or unconsciously dissembling fear is to complain of the symptom which is the basis or the result of the particular fear. The patient bitterly complains of headache. But the real distress is not the headache (often it isn't a pain at all), but the idea that the headache means insanity or a stroke. Abdominal distress may be trifling, but it is disabling because to the patient it signifies cancer. But he doesn't say so. He hardly knows that it is so. He doesn't wish constantly to be afraid of insanity or cancer; he prefers to have headache or nausea. How can one successfully treat such a headache or stomachache without becoming acquainted with the patient himself?

FREQUENCY OF MILD MELANCHOLIA

One other very practical aspect of the real patient, the patient above the eyebrows, I must at least mention: the frequency of unrecognized mild melancholia. Instinctively, these patients hide their feelings of uselessness and hopelessness, their self reproach and fear of insanity. They complain of what to them seems to be the cause of their ill feeling, and generally this is some bodily complaint. Headache, insomnia, indigestion, constipation, biliousness; exhaustion from overwork, worry or sexual irregularities; leukorrhea, loss of memory and pelvic distress are among the more common. And the literal physician overlooks the disorder of the personality. The result is useless or harmful treatment. This is bad enough. What is worse, the patient is given every chance to commit suicide — which he rather frequently does. In Chicago there are more than 600 suicides a year, and I am quite sure that fully 400 of these are due to melancholia — every one of them preventable.

EFFECT OF DISTURBING EXPERIENCES

The relations of past experience to present conduct are most complex. Our feelings and behavior today are the result of myriad experiences, most of them forgotten, and still more not in our awareness at any given time. No man can trace all the steps that have led him to be a Republican or to dislike a certain person. Why does Miss X delight in ice cream and abominate pork chops? It didn't just happen. There are reasons. Of four men in trouble one prays, one gets drunk, one has a fit and one has a headache. Why? That is for us to find out. Generally it can be done. Not always.

Clinically, the relation of a pathogenic experience to consciousness is generally one of two, with no definite line of division. First, the patient remembers perfectly well the (generally unpleasant) experience, but has no idea that it has anything to do with his

1. Patrick, H. T.: The Factor of Fear in Nervous Cases, J. A. M. A. **67**: 180 (July 15) 1916.

present trouble. Second, the disturbing episode has been quite forgotten and is brought back into consciousness only by some unusual stimulus or mental state. Obviously, it may happen that we cannot bring it back at all. To illustrate the first type:

A young traveling man was unable to eat in restaurants because of intense feeling of prostration and oppression, palpitation, etc. He had not in any degree forgotten that a few months before consulting me he had been taken very ill while dining in a restaurant, had nearly fainted and had liberally distributed vomitus over the floor before he could get out. But apparently a connection between the causative disagreeable episode and the neurosis never had occurred to him, and information of the illness was not volunteered. It was elicited by leading questions.

Another example:

A middle-aged, happily married woman complained of nervousness, insomnia, mental depression, intense dislike of social intercourse, even with good friends, and intense agoraphobia. Painstaking inquiry for more than two hours, evidently with the cooperation of the patient, failed to elicit a cause. Only after the analysis of two dreams by Dr. Lewis J. Pollock, my assistant at that time, did we learn of events in her childhood and youth causing poignant shame and self reproach that were clearly the cause of her disorder. These experiences she had not forgotten; but their relation to her present complaints had never occurred to her, the subject was distasteful, and instinctively, scarcely deliberately, she had suppressed the facts.

An example of the second type:

A young married woman had so-called vaginismus to a degree entirely preventing intercourse. No local cause could be found. The patient neither feared nor objected to the nuptial embrace; indeed, she was most anxious to be a complete wife and an early mother. It was only after many questions and the awakening of many associations that she recalled two not very striking experiences when she was about 11 years old. Aside from temperament, these were the prime cause of her disorder; but apparently for years she had not consciously thought of them.

NEED OF APPROPRIATE TREATMENT

A good many years ago, Möbius described akinesia algera, paralysis from pain; the patient does not move because it hurts to move. When we come to therapeutics for the patient himself, many of us have a sort of amblyopia algera. We do not see because it is uncomfortable to see. It is much more comfortable to say, "nothing to it," "just a nervous crank" and do nothing, than it is to realize that here is a pathologic condition, obscure, maybe complex, that must be laboriously worked out. So we naturally go blind, see nothing and do nothing. Probably every physician makes an effort to regulate the bowels. How many of us make an effort to regulate emotional and intellectual movements? But intestinal stasis is vastly to be preferred to intellectual stagnation: so-called autointoxication is not half so lethal as disintegrating emotions.

To state it another way, we must first have a just conception of the nature of the trouble and then institute *appropriate* treatment. Nowadays few ovaries are removed for dizziness and indigestion, but the "rest cure" is applied about as heedlessly as was formerly oophorectomy. Confinement to bed, isolation, forced feeding and massage for perturbations of the personality may be compared to a linseed poultice for pain in the belly. Occasionally the cataplasm suffices, but treatment of the cause is to be preferred. Equally, we should treat the cause of neurotic manifestations. Who would prescribe a pill for vagrancy or a powder for prostitution? The tramp and the prostitute are recognized as defective, unadaptable to society as now constituted, except on the underworld level. The psychasthenic (nearly always miscalled neurasthenic), the neurotic, the psychotic is a rather similar product. Unadapted to the upper strata of social efficiency, he gravitates to the underworld level of pain, prostration and dyspepsia: the realm of consultation rooms, hospitals and sanatoriums. But I hasten to add that when properly adjusted to his environment, the neurotic may be one of the most efficient, valuable and delightful members of society.

A fine young woman was about to decline marriage because handicapped, even disabled, by what she did not recognize as phobias. For years she had been unable to go down town except in a carriage, and then only for a few minutes. To go alone to a nearby market was out of the question. Deeply religious, she could not go to church alone, and when accompanied, she could sit only near the exit. There were other phobias. A short course of training and reeducation removed the lot, and for about ten years she has been an ideal wife and mother.

A fine young chap of 22, because hypersensitive and hyperconscientious, became depressed and worried over the usual sexual problems of youth to the extent of total disability. The situation was explained to him: in a proper environment, he was carefully guided and was gradually led back to normal activities. In the spring of 1917, he entered the army and served brilliantly throughout the war.

An unmarried woman of 29, doing office work, for ten years had had attacks of dyspnea and palpitation, great weakness and insomnia. Although she positively and honestly denied that she was afraid of anything, exact questioning showed that she had several intense phobias. She really was ill and had been for ten years. But the trouble was not the heart muscle, it was lack of adjustment to her job, her associations and necessary conditions of living. Fortunately, she married happily, and her bodily complaints all disappeared.

A woman of 32, of the intellectual type, had been an invalid for years. Accurately to describe her symptoms would require a descriptive catalogue. They included "stomach trouble," "rectal trouble," severe headaches, ready exhaustion, tenderness at places over the abdomen and in the pelvis, loss of weight and anemia. She certainly had enteroptosis, with the right kidney far down. One of the greatest surgeons of Chicago thought it best to take out the appendix, fasten up the kidney, ventrifix and curet the uterus. Did all this help? Not a bit. She was sent East for a prolonged rest cure under the greatest master of that procedure, with the same result. She remained the same practically useless martyr, a burden to herself and the despair of her family. Finally, she was induced to take up an active, intellectual and taxing occupation in an environment that fitted her. Presto! The baffling organic disorders, the profound prostration, the disabling pains evaporated. She had found her place, and she has continued to be a busy, exceedingly useful and happy woman.

The following case shows the obverse mechanism:

A young man of ample means, shy and a bit effeminate, retired to a small farm where he raised a few fancy sheep and experimented in crossing flowers—all to his complete satisfaction, and with perfect health. Circumstances forced him into business and the hated city. He developed rebellious stomach, insomnia and headache, lost considerable weight and frequently his temper.

NATURE OF THE TREATMENT

These illustrations, which might be continued indefinitely and with interesting variations, serve to indicate not only that the neuropath may be useful but also what sort of treatment he should have. Very simply stated, the object is so to mold the patient that he

will fit his environment, and so to arrange the environment or so to place the patient that the environment fits him. Sometimes it cannot be done. Our laws and customs contain fragments from the dark ages and more primitive eras. So do we. Some of us belong to the period about 100 A. D. For such, transplantation to the present epoch is difficult. A few of us belong in the stone age, and we cannot live in the captivity of modern civilization without falling ill. Perhaps occasionally one is 500 years ahead of his time. If so, he has a hard life, and probably is a failure, judged by our standards.

In assisting to adjust a patient to necessary conditions, frequently we have to show him that he can do things that he says he cannot do. That is his way of expressing his great reluctance to do or fear of doing something necessary for his health. Demonstration discounts admonition. He should be given an understanding of his situation; but simply telling him is not enough. We must demonstrate to him that he can eat turnips or walk a mile or sleep without a hypnotic or go without a headache powder.

Let me again emphasize that the headache or the pain in the legs or indigestion is simply a means of escape from something for which the patient feels himself inadequate, or really is inadequate. Our job is to make him equal to the task he is trying to escape or so modify the task that he can perform it, or give him another which he can do with satisfaction. To say, "Don't worry" or "Why Worry?" or "That headache isn't in the least serious" is not enough. The unwholesome ideas, the distressing disorder, can be driven out only by wholesome satisfactory ideas, which in the vast majority of cases means a satisfying occupation, a something which makes life taste good.

THE OUTCOME

And for our encouragement, we may remember that the temperamental individual who is confused and discouraged by life's perplexities and takes refuge in physical disabilities is, when rightly placed, likely to be the finest enthusiast, the most glowing optimist. Just as he is dominated and defeated by a depressing idea, so is he exhilarated and activated by sanguine ideas. Some of the greatest and most beautiful work of all time has been done by these men and women who are too much controlled by their emotions, too sensitive to the jars of a battling society, too unstable to carry the gross burdens of a materialistic world. Ours the task, then to strengthen their intellectual control, to toughen their shrinking sensibilities, and adjust the burden to the bearer. Thus may we, too, add to the sum total of human health, happiness and progress.

25 East Washington Street.

Diet and Health.—A lack of the knowledge of how to adjust income and food expenditures is holding many children back in normal development, and thereby decreasing the ability of future citizens. Oftentimes medicine can be of no lasting value until the diet is regulated, and quite frequently when the diet is regulated medicine is unnecessary; but in the majority of cases the doctor has not the time to sit down and plan this adjustment with the mother, and the problem of food economics is a work apart from nursing, just as nursing is apart from the practice of medicine. To meet just such a situation as this the nutrition specialist in social work has come into existence.—L. L. Gillett, *The Commonwealth* **6**:111 (May-June), 1919.

PELVIS OF KIDNEY AS POSSIBLE SOURCE FOR INFECTION OF BLOOD STREAM

PRELIMINARY REPORT *

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During recent years it has been generally conceded that in cases of renal infection the kidney is infected secondarily following a primary bacteremia. In some instances it seems that the kidney, previously infected either through the blood stream or by an ascending infection, may be the cause from which a bacteremia results. For the purpose of investigating this interesting problem, experiments have been conducted under the direction of the Departments of Urology, of Experimental Bacteriology, and of Experimental Surgery, with reference to the following questions:

1. Can organisms pass from the pelvis of the kidney into the blood stream?
2. Are the conditions under which they pass at all analogous to the pathologic status found clinically?
3. Are there clinical cases in which the kidney has acted as a focus of infection?

Our investigations have been concerned, as yet, only with the first two of these hypothetic questions.

The literature concerning the absorption from or the passage of organisms through the kidney is very meager. Albarran[1] was the first to investigate experimentally the infections of the blood stream through the kidney. In 1888, working with *Bacillus pyogenes*, which was afterward identified as *Bacillus coli* by Krogius, Achard and Renault,[2] he produced infection in the blood stream by introducing *Bacillus pyogenes* into the ureter. His work was without previous bacteriologic control of the blood, however, and in many cases peritonitis occurred. He traced the organism from the bladder to foci of infection in the kidney. "From these foci the organisms go into the connective tissue and then penetrate into the blood vessels, enter the circulation, and lead to far off emboli." Thus it is seen that thirty years ago the thought was suggested that the kidney might be a focus for blood stream infection.

Burns and Swartz[3] do not believe that absorption takes place from the pelvis of the kidney under normal conditions. If an acute pyelitis occurs, however, absorption, and the clinical phenomena of chills and fever result. These authors consider such clinical manifestations as due to the absorption of urine and bacterial toxin either from the blood vessels or lymphatics of the renal pelvic mucosa directly, or from the urine and bacterial toxins retained in the uriniferous tubules. They do not suggest, however, that these clinical symptoms may be due to the passage of the bacteria through the kidney into the blood stream, thus causing a bacteremia. In their later work, after the injection, by the gravity or syringe method, of indigocarmin and india ink particles into the previously

* From the Mayo Clinic.

1. Albarran, J.: Étude sur le rein des urinaires, Thèse de Paris, 1888.
2. Krogius, Achard and Renault, quoted by Brown, T. R.: The Bacteriology of Cystitis, Pyelitis and Pyelonephritis in Women, with a Consideration of the Accessory Etiological Factors in These Conditions, and of the Various Chemical and Microscopical Questions Involved, Johns Hopkins Hosp. Rep., **10**: 11-89, 1902.
3. Burns, J. E., and Swartz, E. O.: Absorption from the Renal Pelvis in Hydronephrosis Due to Permanent and Complete Occlusion of the Ureters, J. Urol. **2**: 445-455 (Dec.) 1918.

ligated ureter, they found these substances in the opposite kidney, in the liver, lungs, and spleen. They then conclude: "It is reasonable to suppose that if particles of ink can travel in this manner, bacteria and other foreign substances can do likewise."

Macht[4] states that certain drugs or poisons may be absorbed through the walls of the ureter and the kidney pelvis. Weld[5] has shown with what ease certain drugs may be absorbed from the renal pelvis, and the untoward action of some of them. Weld's finding that "absorption from the kidney pelvis indicates that the kidney may be a focus of infection which should always be considered" stimulated me to make the present investigation.

EXPERIMENTAL WORK

Dogs were used in all the experiments. The animals were etherized with a constant ether tension; their condition was kept as near normal as possible by the judicious use of heat, etc. In some of the experiments the blood pressure was recorded. All operative manipulations were carried out with the minimum of trauma and hemorrhage. *Bacillus prodigiosus* was the organism chosen, since it is easily identified, since it probably never occurs spontaneously in the sites from which cultures were taken, and since it is rarely the cause of bacterial contamination in the laboratory. The bacillus was grown in broth cultures and injected by the gravity method.

TABLE 1.—RESULTS OF EXPERIMENTS IN SERIES 1

Experiment	Pressure Above Kidney Pelvis, Cm. of Water	Positive Cultures of Bacillus Prodigiosus
550-19	20 to 30	1. Renal vein 2. Left kidney cortex 3. Left kidney medulla
560-19	20 to 30	1. Left kidney medulla
562-19	20 to 30	1. Left kidney cortex 2. Left kidney medulla
565-19	10 to 30	1. Heart blood 2. Liver 3. Renal vein, A and B
592-19	20 to 30	All cultures negative
618-19	20 to 30	1. Left kidney cortex
620-19	20 to 30	1. Left kidney cortex
630-19	20 to 30	1. Left kidney cortex 2. Right kidney cortex
649-19	20 to 30	1. Left kidney cortex
654-19	20 to 30	1. Left kidney cortex
657-19	20 to 30	1. Left kidney cortex
666-19	20 to 30	All cultures negative

A straight glass tube about 2.5 mm. in diameter was connected by a T-tube to a cannula inserted into the ureter and to a graduated buret. The straight glass tube was graduated in cubic millimeters. A stopcock was inserted on each side of the T-tube. The fluid containing the bacteria was placed in the buret and allowed to flow into the graduated tube to any desired height. At this definite and controlled pressure it was then allowed to enter the ureter. Great care was taken to exclude air from the entire system and not to contaminate adjacent tissues.

The dogs were killed with ether at the end of from two to three hours, and cultures taken from the heart's blood, the lungs, liver, spleen, inferior vena cava opposite the renal vein, right kidney cortex and medulla, and left kidney cortex and medulla. The cultures were made by planting from 2 to 5 c.c. of blood and from 0.2 to 0.5 c.c. of the tissue juice of the various organs into tall tubes of glucose broth. The material from the tissues was obtained by aspirating the macerated particles and juice into sterile pipets. The inoculated tubes were allowed to stand at room temperature for from forty-eight to ninety-six hours. The positive cultures were then plated on plain agar.

TABLE 2.—RESULTS IN SERIES 2

Experiment	Pressure Above Kidney Pelvis, Cm. of Water	Positive Cultures of Bacillus Prodigiosus
531-19	78	1. Left kidney cortex 2. Left kidney medulla
534-19	70	1. Heart blood 2. Right kidney 3. Liver 4. Renal vein?
704-19	60	1. Lung 2. Renal vein, A and B 3. Heart blood, A and C 4. Right kidney cortex 5. Left kidney cortex 6. Right kidney medulla 7. Liver, A and B 8. Spleen
800-19	60	1. Renal vein 2. Left kidney cortex
801-19	60	1. Liver, A and B 2. Renal vein, A, B and C 3. Heart blood, A, B and C 4. Spleen 5. Right kidney cortex
802-19	60	1. Liver, A and B 2. Spleen
803-19	78	1. Heart blood, A, B and C 2. Renal vein, 1 and 2 3. Liver, 1 and 2 4. Left kidney cortex

SERIES 1.—In the first series, through a lumbar incision a cannula was inserted into the left ureter from 2 to 4 cm. from the pelvis of the kidney. A twenty-four hour broth culture of *Bacillus prodigiosus* was then permitted to flow into the pelvis at from 10 to 30 cm. pressure. From two to three hours afterward the dogs were killed with ether and cultures made as outlined above. Results are shown in Table 1. In twelve experiments even with this low pressure, *Bacillus prodigiosus* was recovered from the blood stream or other organs in three instances. It was found in the left kidney in all but two of the experiments.

SERIES 2.—The procedure in the second series was the same as in the first, with the exception that the pressure at which the organisms were passed into the ureter was increased to from 60 to 78 cm. Results are shown in Table 2. At this pressure, which was slightly less than the secretory pressure of the kidney, the organisms were recovered from the blood stream or other organs in six of seven experiments, and they were recovered from the left kidney in all.

TABLE 3.—RESULTS IN SERIES 3

Experiment	Pressure in Left Ureter, Cm. of Water	Pressure in Right Ureter, Cm. of Water	Positive Cultures of Bacillus Prodigiosus
739-19	20	65	1. Lung 2. Heart blood, A, B and C 3. Renal vein, A and B 4. Liver 5. Right kidney cortex 6. Left kidney cortex
756-19	20	64	1. Renal vein 2. Liver 3. Left kidney cortex
760-19	20	78	1. Liver 2. Left kidney cortex
804-19	20	50	1. Heart blood 2. Left kidney cortex
805-19	20	65	All cultures negative

SERIES 3.—In the third series in addition to the procedure followed in Series 1 and 2, a cannula was inserted into the right ureter 4 cm. above the bladder; to the cannula was attached a straight glass tube. The cannula inserted into the left ureter was also 4 cm. above the bladder. A forty-eight hour broth culture of *Bacillus prodigiosus* and washings from forty-eight hour agar slants were placed in the buret and allowed to flow into the left ureter, while the pressure was

4. Macht, D. I.: Concerning the Absorption of Drugs and Poisons from the Ureter and Pelvis of the Kidney, J. Urol. **2**: 481-485 (Dec.) 1918.

5. Weld, E. H.: Renal Absorption with Particular Reference to Pyelographic Mediums, Med. Clin. North Am., to be published.

kept under 21 cm. The tubing connected with the cannula in the left ureter was then clamped. The femoral vein was isolated, and from 100 to 150 c.c. of a 5 per cent. sodium sulphate solution were injected slowly. The secretory pressure of the right kidney was measured in the graduated tube connected with the right ureter. After from two to three hours the routine procedure as previously described was carried out. The organisms were introduced under a very low pressure and the intrapelvic pressure was subsequently increased by stimulation of the kidney. The results are shown in Table 3. In four of these five experiments, *Bacillus prodigiosus* was recovered in other organs than the kidney.

It may be concluded, therefore, that bacteria can pass from the kidney pelvis into the blood stream, and that they may do this under conditions analogous to some of the pathologic states found in man.

INTRAVENOUS INJECTIONS OF HYPERTONIC GLUCOSE SOLUTION IN INFLUENZAL PNEUMONIA

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One of the trying experiences of the medical profession during the late pandemic of influenza was the apparent helplessness in the treatment of the chief complication, pneumonia. The experience at the Camp Travis Base Hospital probably paralleled that of other similar institutions. At first, only the commonly accepted methods of treatment were used; but it soon became evident that some additional measures must be employed, else a very high mortality would result. At this hospital, resort was made to the use of quinin because of its recognized pneumococcidal action, and to the intravenous injections of hypertonic glucose solution. The results following the quinin medication are to be reported by others. The good results following the glucose treatment are attested by a relatively low mortality. This report deals with the results obtained in 319 cases of influenzal pneumonia, in which one or more injections of a sterile hypertonic glucose solution were used.

The use of glucose in the treatment of serious diseases is not new: heretofore, its use has been restricted chiefly to administration by mouth and rectum for the purpose of supplying the organism with a food easily assimilated and of high caloric value. Litchfield[1] has recently urged the intravenous use of hypertonic glucose solution in serious diseases. The present report is offered because it comprises the largest series of cases on record in which the intravenous use of a hypertonic glucose solution has been intensively employed in the treatment of pneumonia.

PREPARATION OF SOLUTION AND TECHNIC OF INJECTION

The solutions were prepared in the base hospital laboratory from chemically pure glucose: Several thousand cubic centimeters of a solution of a desired strength were prepared in distilled water brought slowly to the boiling point in order to dissolve the glucose, and filtered through a heavy layer of cotton to remove any gross contamination; then they were made up to the original volume, autoclaved at 20 pounds pressure for twenty minutes, again filtered through several layers of filter paper and made up to the original volume with distilled water, after which the solution was distributed into suitable flasks, holding about 300 c.c. These flasks after being properly stoppered were again autoclaved, and set aside for use as needed. The necessity for several filtrations is important, for in our experience, the boiling as well as the autoclaving tended to precipitate foreign matter which otherwise would be injected. We have used solutions of four strengths in this series: 5, 10, 15 and 25 per cent. strengths of glucose.

The technic of injection and the apparatus are those commonly employed in the intravenous injection of arsphenamin. Any large vein is suitable for puncture, usually one in the antecubital space being selected. Only three precautions should be taken: First, the solution, containers, tubing and needles should be sterile. Second, the solution as it enters the vein should be kept slightly above body temperature; this may be accomplished by placing the rubber tubing in a basin of warm water. Third, the solution should be injected slowly; it should require from thirty to forty minutes to complete the injection of from 250 to 300 c.c. We have found that if the fluid is allowed to flow from the needle before puncture at the rate of from sixty to ninety drops per minute this precaution will have been taken. A pinch-cock attached to the rubber tubing is used to control the rate of flow.

RESULTS IN THREE GROUPS OF CASES

For the purpose of comparison, the cases in this series are divided into three groups, based on as accurate a prognosis as possible at the time of the injection. Group 1 includes those patients who were seriously ill, but who were expected to do reasonably well under the usual methods of treatment. Group 2 includes those patients who were critically ill, but who had a fighting chance for recovery under the ordinary methods of treatment. Group 3 includes those patients who invariably died under the former methods of treatment. Many of the patients in the latter group did not receive glucose injections until late, other methods being tried first, only to fail; many were practically moribund at the time of the first injection, as will be noted in the illustrative cases. The subdivision of each group into A and B denotes the day of the disease on which the injections were given. In Group A the injections were made on the first, second or third day of the disease; while Group B includes patients in whom injections were made after the third day. Table 1 shows the results obtained in 319 cases, as regards mortality and length of febrile period.

TABLE 1.—RESULTS OBTAINED IN A SERIES OF THREE HUNDRED AND NINETEEN CASES

	Group 1		Group 2		Group 3	
	A	B	A	B	A	B
Number of patients injected	75	37	87	37	51	32
Deaths	0	0	8	0	34	20
Mortality, per cent.	0	0	9.1	0	66.6	62.5
Average day of disease on which first injection was given	2	4.2	1.8	4.6	2	5
Average length of febrile period in days	4.5	8.2	4.9	9.6	5.6	9
Complications	4	2	6	4	4	1

1. Litchfield, Lawrence: Glucose Intravenously as a Therapeutic Measure, J. A. M. A. **71**: 503 (Aug. 17) 1918.

So-called protein reactions occurred in forty-two cases. Possibly the complete removal of all foreign material from the solution would eliminate this feature. Table 2 shows the mortality rate as regards strength of solution injected. The distribution of the forty cases as regards strength of glucose injected is shown in Table 3.

TABLE 2.—RELATION OF STRENGTH OF GLUCOSE SOLUTION TO DEATHS

	Strength of Solution, per Cent.				
	5	10	15	25	Mixed
Number of patients injected	31	201	28	39	20
Deaths	8	39	3	9	2
Deaths in Group 3	5	35	3	8	1
Mortality, per cent.	25	19.4	10	25	10

TABLE 3.—RELATION OF STRENGTH OF GLUCOSE SOLUTION TO THE OCCURRENCE OF PROTEIN REACTION

	Strength of Solution, per Cent.				
	5	10	15	25	Mixed
Number of patients injected	31	201	28	39	20
Number of reactions	2	37	0	2	1
Per cent. of reactions	6.4	18.3	0	5.1	5

The subjoined case reports illustrate the effect of the glucose injections. The first case was one of the most severe encountered during the epidemic, while the second was quite severe but less so than the first.

REPORT OF CASES

CASE 1.—The onset of influenza occurred, Oct. 29, 1918, and of pneumonia, Nov. 3, 1918. The patient was admitted to the hospital, November 2. The day following, bilateral consolidation of the lower lobes was noted. November 4, 250 c.c. of a 10 per cent. glucose solution were injected intravenously. November 5, the condition was critical, the patient was semicomatose and delirious, and there were marked cyanosis and dyspnea. Two hundred and fifty c.c. of the glucose solution were given which produced some improvement in the degree of cyanosis and in the condition of the pulse. November 6, the lung involvement had extended to the left upper lobe; the pulse was rapid and weak; the temperature was 103.8 F.; the pulse rate was 120, and respiration was 38. Two hundred and fifty c.c. of glucose solution were injected, after which the pulse became stronger and slower. November 7, the pulse rate was 130 and was irregular. Two hundred and fifty c.c. of glucose solution were injected. The patient was delirious, but slept after the injection, the first time in three days. November 8, the pulse was rapid and thready, respiration was shallow, the nails and lips were extremely cyanotic, and the mouth and tongue were dry and coated. Two hundred and fifty c.c. of glucose solution were given intravenously, after which the patient slept. November 9, the patient was still delirious and cyanotic. Two hundred and fifty c.c. of glucose solution were injected, followed by marked improvement. November 10, the patient was rational, there was no cyanosis; the pulse was regular, and of improved quality. The patient continued to improve, but convalescence was prolonged owing to the development of pulmonary tuberculosis.

CASE 2.—The onset of influenza occurred, November 7, and of pneumonia, Nov. 11, 1918. The patient was admitted to the hospital on the latter date with definite consolidation of the right lower lobe, and with temperature of 103 F. November 15, the lung involvement had extended to the right middle lobe, and the patient became extremely cyanotic and dyspneic. He was given 250 c.c. of a 10 per cent. glucose solution intravenously, which was followed by a moderately severe reaction, after which he showed remarkable improvement. The following day he had improved, but he was given a second injection of glucose. November 18, the temperature was normal, and recovery followed.

COMMENT

The beneficial effects of an intravenous injection of glucose solution are most striking in those patients who are critically ill, and who present the toxic symptoms commonly observed in this disease, as nausea and vomiting, anxiety, restlessness, vasomotor disturbances shown by cyanosis, rapid, feeble pulse, a cold, clammy skin, and a dry coated tongue and mouth. In many instances, a change occurring shortly after the injection to a state of well being seemed almost miraculous. Frequently, the patient would fall into a restful sleep before the completion of the injection.

An analysis of Table 1 shows that among 112 patients in Group 1 there were no deaths; among 124 patients in Group 2 there occurred eight deaths, and among eighty-three patients in Group 3 there occurred fifty-four deaths. The mortality rates for each group being: Group 1, 0; Group 2, 6.45, and Group 3, 65.06. It is expected that the mortality would be lower among those patients receiving glucose early, yet in Group 2 there occurred eight deaths among eighty-seven patients receiving glucose injections during the first three days of the disease, while among thirty-seven patients to whom the injections were not given until after the third day there were no deaths. The number of cases as well as the number of deaths in this group is too small to warrant the drawing of any conclusions from these results. In Group 3 there occurred thirty-four deaths among fifty-one patients receiving injections during the first three days of the disease, while among thirty-two patients receiving the first injection after the third day there occurred twenty deaths, the death rate being slightly lower in the latter. Two points must be considered before any conclusions are drawn in regard to Group 3 cases; first, that a hopeless prognosis had been made in all these cases; and second, that by the end of the third day some of the patients in Subgroup B had probably developed a certain amount of immunity. Quite significant is a definite shortening of the febrile period in those cases in which glucose was received prior to the third day; in each group, this time was reduced practically 50 per cent. Complications were too few to warrant the drawing of any conclusions relative to the influence of glucose injections on their occurrence.

The majority of patients in this series received injections of a 10 per cent. glucose solution. The important facts relative to the relationship of different strengths of the solution injected to the number of deaths are shown in Table 2. The lowest death rate occurred among those patients receiving a 15 per cent. solution, and the highest among those receiving a 5 and 25 per cent. solution. The number of cases in these three series differs so slightly that the inference that a 15 per cent. solution is the one of choice is probably not warranted. The death rate in the group of cases in which the 10 per cent. solution was used is 19.4 per cent., the average for the entire series of 319 cases being 19.1 per cent. From our experiences we have not been able to demonstrate that the injection of a 25 per cent. solution has any particular advantage over that of a 10 per cent. solution. Theoretically a 25 per cent. solution should be more efficacious than a weaker solution, and possibly its use in a larger series of cases than ours would bring out this advantage.

PROTEIN REACTION

The occurrence of the so-called "protein reaction" following the injection of glucose solution is mentioned

by Litchfield; we encountered it in forty-two instances, or 13.4 per cent., of the patients injected. Erlanger and Woodyatt,[2] and Wilder and Sansum[3] have given a large number of glucose injections without the occurrence of such reactions. Concerning what may be the responsible factor for this phenomenon we confess ignorance. It has been suggested that failure to remove all foreign matter from the solution may be responsible. Opposed to this suggestion is a condition that we have several times observed:. In attempting to provoke a therapeutic protein reaction, we have repeatedly failed after the addition of 1 c.c. of our killed typhoid bacilli mixture to 250 c.c. of glucose solution, and this occurred in patients who previously and afterward showed a typical reaction following the injection of the same amount of the bacterial mixture diluted in 2 c.c. of physiologic sodium chlorid solution. We are certain no harm has resulted in our cases from the occurrence of this reaction, and, as reported elsewhere,[4] it may have a definite therapeutic value.

ACTION OF GLUCOSE

The mechanism by which glucose solution aids in recovery is somewhat complicated and probably not altogether known; undoubtedly both the ingredients present in the solution play a definite rôle, Litchfield has emphasized that the process of dehydration in serious diseases is especially potent for evil because least appreciated and consequently neglected in treatment. The introduction of several hundred cubic centimeters of water directly into the blood stream immediately tends to correct this dehydration. The introduction of hypertonic solution into the blood stream would render the blood hypertonic if it were not for several changes which occur to maintain a state of isotonicity. The value of the glucose solution lies in part in the occurrence of these changes. As the glucose solution enters the blood, there at first is a withdrawal of fluids from the body tissues sufficient to maintain an isotonic condition in the blood. That this is probably the case is shown by the fall in the hemoglobin content of the blood following such injections; and also blood chemistry studies, in our cases, of blood taken during and shortly following the injections show a normal sugar content. The latter finding may possibly be due to a withdrawal of the glucose from the blood as rapidly as it is injected; but it may also mean a dilution of the blood by fluids extracted from the tissues of the body. This condition is not due to the elimination of glucose from the body through the kidneys for in our cases glycosuria was uniformly absent. The occurrence of the extraction of fluids from the tissues, as just assumed, would only tend to increase the degree of dehydration in the tissues of the body, if it were not for the fact that the glucose is rapidly taken up by the tissues. This process is increased by the condition of starvation present in the tissues, and makes demand on the blood for fluid which is necessary in the physiologic process of cell metabolism; this brings about a reversible flow of fluids to the tissues, and tends to neutralize the tissue dehydration.

In diseases characterized by toxin production, either from the products of the infecting organisms or from the products of catabolism, with the extraction of fluids from the tissues there is considerable washing out of toxins into the blood stream, from which these may be more readily eliminated through the kidneys.

In addition to the influence of the glucose solution on the condition of dehydration, it also has a marked effect on the condition of starvation, characteristic of most serious infectious diseases. Lusk[5] has pointed out that there is a certain amount of stimulation of cell activity by glucose, in addition to its purely food value. The marked improvement in the pulse following glucose injections would suggest a possible direct stimulation of the cardiac muscle.

We do not know how to account for the marked improvement in desperate cases following glucose injections, unless they are due to the theoretical processes that have just been mentioned. One is struck by the rapid improvement in many cases: patients previously restless and semidelirious have dropped into a restful sleep during the course of an injection, the anxious toxic look has disappeared, and the hot, dry skin has become moist. The tongue, previously dry and coated, has become moist. The appetite for food and liquids becomes less capricious and is stimulated. The urinary output is increased.

CONCLUSIONS

1. The intravenous injection of glucose solution is a valuable aid in the treatment of serious cases of pneumonia.
2. The results following are almost immediate, but are not necessarily lasting; and success may follow only after repeated injections.
3. The injection of glucose solution is not more difficult than the injections of other intravenous medication.
4. It is not intended that glucose solution should be substituted for antipneumococcic serum in cases of Type I infections; it may, however, be added to the serum treatment.

2. Erlanger, Joseph, and Woodyatt, R. T.: Intravenous Glucose Injections in Shock, J. A. M. A. **69**: 1410 (Oct. 27) 1917.
3. Wilder, R. M., and Sansum, W. D.: *d*-Glucose Tolerance in Health and Disease, Arch. Int. Med. **19**: 311 (Feb.) 1917.
4. Wells, C. W.: Intravenous Injections of Foreign Protein in Influenzal Pneumonia, J. A. M. A. **72**: 1813 (June 21) 1919.
5. Lusk, Graham: Elements of the Science of Nutrition, Ed. 2, Philadelphia, W. B. Saunders Company, 1917.

AN OUTBREAK OF BOTULISM

REPORT OF CASES

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The outbreak of *Bacillus botulinus* poisoning reported in this paper occurred at Grosse Pointe, a residential suburb of Detroit. The source of the toxin was a glass jar of ripe olives. This food was later analyzed by Dr. Herbert W. Emerson of the Hygienic Laboratory of the University of Michigan, Dr. Plinn F. Morse of Harper Hospital, and the Detroit Board of Health. *Bacillus botulinus* was found by each of these investigators, and the fluid from the olives was demonstrated to be lethal for guinea-pigs in doses of 0.01 c.c.

THE OUTBREAK

The olives were first served at a formal dinner, Oct. 18, 1919, at the residence of Mr. M. W. S., and there were present the host, hostess and six guests. One of the guests noticed that the olives were soft and remarked that they had a peculiar odor. They were, however, eaten by four of the diners and one waitress, and of this group two died, two were made moderately

sick but recovered, while one escaped entirely. On the following days, October 19-21, the olives were eaten by Master L. S. and Miss F. S., children of the host, and by Miss J. M., a waitress in the home. All of this group died. There were in all eight persons who are known to have eaten the olives. Of these one escaped entirely, two were slightly affected, and five died.

CLINICAL HISTORIES

CASE 1.—Mrs. C., aged 27, a temporary waitress, ate two or more olives in the evening after the dinner. On the morning of the next day, October 19, she had slight difficulty of vision, pain in the head and nervousness. At noon she had slight difficulty in swallowing. She was seen by her family physician about 3 p. m., who could find no objective symptoms of disease. At 7 p. m. she began vomiting and had moderate abdominal pain and diarrhea. These symptoms soon were followed by collapse, and death occurred at 10 p. m., twenty-four hours after eating the fruit, and twelve hours after the onset of symptoms.

CASE 2.—Mr. A. I. L., aged 45, ate one or more olives at dinner, October 18. The following day, October 19, he played golf. While on the links he had difficulty of vision, and on returning home he said that he had never felt so tired before. October 20, he noticed diplopia and at night difficulty in articulation. October 21, he developed great difficulty in swallowing and articulation, which later developed into total paralysis of deglutition and phonation. At this time the pupils were dilated and reacted slowly to light. There was internal strabismus of the right eye and partial ptosis of the right eyelid. The eyes were suffused and red. There was paresis of the whole right face. The pharynx and larynx were filled with thick mucus, which the patient could not dislodge. The blood pressure was 140 systolic and 80 diastolic. There was no fever, the urine was normal, the nonprotein blood nitrogen was 36 mg. per hundred c.c., and the Wassermann test was negative.

October 22, dyspnea with laryngeal spasm began. The tongue could not be protruded. The patient became weaker and died of respiratory paralysis that evening, four days after taking the toxin and after an illness of three days.

CASE 3.—Mrs. A. I. L., aged 43, ate a small part of one olive at dinner, October 18. October 21, about sixty-five hours following the meal, she developed slightly disturbed vision, mild ptosis, obstinate constipation and difficulty in swallowing solid food. These symptoms were not severe, and she recovered in a few days.

CASE 4.—Mrs. M. W. S., aged 48, ate a small part of an olive, October 18, and a whole olive, October 19. October 22, she noted mild haziness of vision with diplopia, and October 23 slight difficulty in swallowing solid food, and moderate ptosis of the right eyelid. Aside from the ptosis the physical examination was negative. October 24, at 8 p. m., she received 1 c.c. of antibotulinus serum intravenously and 10 c.c. at 9 p. m. On the following day she received 10 c.c. subcutaneously. The ptosis continued for several days, and she recovered very slowly from the nervous and muscular debility.

CASE 5.—Master L. S., aged 12, ate an unknown number of olives, October 19, 20 and 21. October 22, about noon, he vomited once and then was comfortable until late in the afternoon, when he developed dimness of vision and diplopia and had difficulty in entering his home from the automobile. About 7 p. m. he began vomiting, and about 8:30 p. m. he had a severe convulsion lasting one minute. He vomited once after the convulsion. At this time there began inability to swallow and speak and marked weakness. He rapidly failed, and died of respiratory paralysis at 3 a. m., October 23, three days after first eating the olives and twelve hours after the onset of symptoms.

CASE 6.—Miss J. M., aged 43, a maid in the home of Mr. M. W. S., ate an unknown number of olives, October 19-21. About 3 p. m., October 22, she began vomiting, with moderate abdominal pain. During the afternoon she developed difficulty in swallowing, diplopia and dimness of vision. These symptoms kept up for twenty-four hours, but she had several periods of a few hours each during which they cleared up almost completely. Calomel was given and good catharsis obtained. She found that olives relieved her nausea and so kept on eating them. On the morning of October 23 she vomited blood. At noon of October 23, paralysis of deglutition became complete and ptosis of the left eyelid was present. During the afternoon she became very weak and had difficulty in breathing, it being necessary to use all the accessory muscles of respiration. The pharynx was filled with thick mucus. In the evening she was in a semicoma and the pulse was rapid, weak and irregular. Nystagmus and strabismus were observed, and râles were present at the bases of both lungs. She died of cardiac and respiratory paralysis at 10:30 p. m on the fourth day after eating olives, and about thirty-six hours after the onset of symptoms.

CASE 7.—Miss F. S., aged 23, ate a total of two or more olives, October 19-21. Illness began on the morning of October 22, when she noticed coryza and sore throat, blurred vision and diplopia. She did not feel sick. October 23, she felt weak. About noon, she started to eat soup and was unable to swallow it. She became nauseated and vomited once. Because of weakness and dimness of vision, she had to be assisted to bed.

At this time the heart, lungs, abdomen and general examination were negative. There was ptosis of both eyes, so that the patient had to throw back the head to see. There was paralysis of the right external rectus muscle. The pupils reacted to light and accommodation, and were normal in size. There was no paralysis of the facial muscles, and the tongue protruded normally. The patient was unable to swallow food or liquids, and there was an accumulation of thick mucus in the pharynx which she could neither expel nor swallow. Her mentality was clear, there were no paralyses or disturbances of sensation, and the deep reflexes were normal. The urine was normal. During the night she rested well.

The following day, October 24, the patient was weaker, but the ptosis was less. Other signs were unchanged, and she spent a comfortable morning. At noon she complained of smothering, and the respiration became wholly thoracic and labored with the accessory respiratory muscles in play. There was no cyanosis or dyspnea. The mucus became more annoying. With difficulty of respiration, the mentality became more anxious and the patient restless. The physical signs did not change during the day.

In the morning the duodenal tube was passed easily to the stomach. Two ounces of magnesium sulphate in one pint of water were injected and later, before the tube was removed, 8 ounces of milk and two eggs. There was a good bowel movement after five hours, and the patient passed about 15 ounces of urine during the day.

At 4:40 p. m., 10 c.c. of antibotulinus serum were given intravenously. At 5:45 p. m., 20 c.c. were given, and at 2:15 a. m. of October 25, 12 c.c. There was no reaction, and the injections seemed to quiet the patient.

On the final day, October 25, she was clear mentally, but drowsy and almost too weak to move. Speech, which up to now had been fairly clear, became very indistinct. The tongue could not be protruded. She complained of numbness in both hands and kept rubbing them "to restore the circulation." She suddenly became cloudy mentally, and the pulse rose to 160. In a few moments she became comatose, the pulse and respiration became slow, and she died of respiratory paralysis seventy-two hours after her first symptoms and on the sixth day after first partaking of the olives.

ANALYSIS OF CASES

Onset.—Difficulty of vision was the first symptom in five cases, and vomiting in two. Abdominal pain was present with the vomiting in one case, and weakness was an accompanying symptom in two cases, in one of which it was very severe. The symptoms began within twelve hours in one case, twenty-four hours in one case, sixty hours in one case, and seventy hours in four cases. The onset was gradual, and in only one case was it of such a character as to cause apprehension of illness on the part of the patient.

Course. — Once established, the disease became steadily and progressively worse in the fatal cases, excepting the one in which the patient showed some temporary relief for a few hours at a time. Death occurred in twelve hours in two cases, thirty-six hours in one, and seventy-two hours in two.

Gastro-Intestinal Symptoms. — These consisted of vomiting and moderate general abdominal pain. They dominated the clinical picture in Case 6, and masked the neurologic syndrome in Cases 1 and 5. They were absent or negligible in the remaining four cases. It was observed that death occurred much more quickly in the patients showing gastric symptoms, and that so far as could be determined they ate more of the poisoned food than did the patients showing only neurologic symptoms.

Neurologic Symptoms.—With the exception of paralysis of the diaphragm, the motor lesions were confined to the cranial nerves.

The olfactory (first), the trigeminal (fifth) and the auditory (eighth) nerves were not affected in any of the cases. The oculomotor (third), the trochlear (fourth) and the abducens (sixth) nerves were involved very early in every case. There was ptosis of one or both eyelids, and diplopia and paralysis of one of the ocular muscles, in two of the cases the right external rectus being affected. In only one of the cases, Case 2, was mydriasis present. Nystagmus was observed in Case 6. Vertigo was not seriously complained of by any of the patients. The facial (seventh) nerve showed involvement in Case 2, in which paresis of the right face appeared. The paralyses involving the glossopharyngeal (ninth) and the vagus nerves (tenth) were the most distressing features of the illness and occurred in every case. The difficulty of swallowing appeared shortly after the disturbances of vision, and sooner or later complete paralysis ensued. Strangling generally followed attempts to swallow. Though there was no excess of secretion, there was an annoying accumulation of mucus in the pharynx and larynx which the patient could not expel. There was great difficulty in articulation in Case 2. Paralysis of the trapezius and sternocleidomastoid muscles or of the deep muscles of the neck was not observed. The spinal accessory (eleventh) nerve may have been involved in the pharyngeal paralysis. Paralysis of the hypoglossal (twelfth) nerve appeared in two cases shortly before death. Paralysis of the diaphragm, as evidenced by total absence of abdominal breathing, was observed in Cases 6 and 7 toward the end of the illness. It may have been overlooked in the others. The patients at that time breathed heavily but not over 28 per minute, and the accessory respiratory muscles were in play. They complained of smothering and lack of air, but there was no cyanosis of lips or face. Whether the paralysis was due to injury to the phrenic nerve or to interference with the respiratory center we are unable to say. Incoordination was not observed.

A general convulsion occurred in Case 5 (Master L. S., aged 12). It was severe but of short duration, and did not recur.

With one exception, the mentality was clear in all the patients until shortly before death, when drowsiness and inattention to environment appeared. Patient 6 had a period of coma on the last day lasting two or three hours from which she partially aroused. Patient 1, not observed by us, was described by her physician as hysterical, which condition was attributed to a domestic misunderstanding of a few hours before.

The temperature was normal or subnormal in all cases except following serum administration in Case 7 and shortly before death in Case 2. The respiration was below 30 in all cases in which it was noted. The pulse was rapid and variable in rate, a little exertion or anxiety sending it as high as from 130 to 150 per minute. The general physical examination was negative in all cases except Case 6, in which there were râles at the bases of the lungs a few hours before death.

Urinalysis in two cases was negative. Blood counts were not made. One nurse called our attention to a peculiar sweetish odor in the stool of three patients.

The termination of illness came with great weakness and collapse, slowing and diminishing of the respiratory excursion, and a rapid, weak pulse. The heart continued to beat after the breathing had ceased.

Diagnosis.—In our experience, two points stand out: First, cranial nerve paralyses are constant symptoms in food poisoning due to *Bacillus botulinus;* they frequently precede the gastric symptoms, and they may constitute the whole clinical syndrome. Second, the time of onset of symptoms varies to such an extent that the poisoned individuals may become widely scattered and the presence of an outbreak may not be recognized.

The first patient to be taken sick, Case 1, was not observed by us and her illness was unknown to the family until, seeing the report of the death of the boy in the papers, her relatives called up. Her physician was puzzled over the case and suggested poisoning, but his suspicions were not aroused enough to demand a necropsy.

The cause of illness in the second patient was also unrecognized. A diagnosis of pseudobulbar paralysis was made on the evidence of paralysis of the third, seventh, tenth and twelfth cranial nerves, the first two showing right sided lesions. The etiology of the condition was obscure because the patient was in excellent health and presented no evidences of cardiovascular disease or syphilis. A bulbar palsy of infectious origin was ruled out by the absence of fever, and similarly a diagnosis of acute poliomyelitis with bulbar symptoms was discarded. Because of the rapidity of the course, progressive muscular atrophy of the bulbar type and myasthenia gravis were not considered. Poisoning by belladonna, hyoscyamus or gelsemium were impossible because the patient had not taken any of the drugs. The unsatisfactory conclusion was finally reached that cerebral thrombosis and softening were responsible for the condition. When, October 22, the boy and the maid in the home of Mr. M. W. S. came down almost simultaneously with gastro-intestinal and neurologic symptoms, the presence of food poisoning was recognized and the diagnosis of the two previous cases was cleared up.

Treatment. — Antibotulinus serum was obtained through the kindness of Prof. Robert Graham, of the University of Illinois. Forty-two c.c. of the serum were administered intravenously in Case 7, forty-eight hours after the initial symptoms. It did not affect the disease. Patient 4 received 10 c.c. of antiserum intravenously forty-eight hours after the initial symptoms, and twelve hours later 10 c.c. were given subcutaneously. Her illness was very mild, and we cannot state that the serum had any influence on her recovery.

To be of value, the serum must be administered early. This can be accomplished only by an early recognition of the disease and by having depots of serum

in various centers about the country. The dosage has not been fully established. McCaskey used small amounts, while Dickson reports the use of 85 c.c., or about 250,000 units. If a case of botulism occurs, careful search for the poisoned food should be made and all persons who have eaten it should be given good sized prophylactic doses of the serum.

Gastric lavage, free catharsis by castor oil and enemas, sedatives, supportive measures and, in the subacute cases, feeding by the stomach tube are indicated.

REVIEW OF THE LITERATURE

Dickson[1] states that up to October, 1918, there had been thirty reported outbreaks of botulism in the United States, with 104 cases and seventy-three deaths. Besides these he mentions four unreported outbreaks with a total of twelve cases and two deaths. Bine[2] reports an outbreak of three cases and two deaths, Nevin[3] one of three deaths, and McCaskey[4] one of seven cases and four fatalities. During the past year, besides the outbreak observed by us, one has been reported by Thom, Edmondson and Giltner,[5] and a third occurred in Ohio recently. Thom's outbreak was of five cases with four deaths, and the one in Ohio of eight cases and six deaths. There have been, therefore, at least forty recognized outbreaks of botulism in the United States, with 150 cases and ninety-seven deaths.

The pathology of the disease has been studied by Dickman. The abdominal and thoracic viscera show congestion. The veins and in some cases the arteries show varying degrees of thrombosis, the process beginning in the endothelial lining and eventually leading to occlusion. In the nervous system there are vascular congestion and hemorrhages, more marked at the base of the brain and in the region of the pons. Microscopic changes in the nuclei of the affected nerves were not found by Dickman. He is unable to explain the pathogenesis of the paralyses. We have found no record of examination of the peripheral nerves.

The clinical findings in the recorded cases have been similar to ours. The onset generally occurred before or on the third day after ingestion of the poison, though delays of six and nine days have occurred. The paralyses of the third, fourth, sixth and tenth cranial nerves were almost universally present. Great muscular weakness, incoordination and staggering were often found. Several persons have had paralysis of the sternocleidomastoid and trapezius muscles. Motor paralysis of the stomach with food retention for many days has been noted, and severe constipation is common. The course of some of the cases has been longer than ours, and there are several instances in which patients extremely ill eventually recovered after weeks of illness. The laboratory tests were all negative except for moderate leukocytosis.

Burke[6] has demonstrated that *Bacillus botulinus* occurs in nature under conditions that are ideal for the contamination of foods such as are canned for human consumption. In certain regions she has recovered the organism from moldy and bird picked cherries, pole bean leaves, spiders taken from bean plants, and moldy hay. It was also found in the intestinal contents of a hog that had eaten vegetables contaminated by the bacillus several months previously. Burke[7] has also found that the spores are more resistant to heat than has previously been supposed, some of them surviving a temperature of 100 C. for from fifteen minutes to two hours, and steam under 15 pounds pressure for ten minutes. Dickson, Burke and Ward[8] have investigated the efficiency of certain of the methods for sterilization of home canned vegetables. They found that the organism survived when the can was placed in boiling water for two hours, and when fractional sterilization of fifteen minutes for three successive days was employed. Fractional sterilization of one hour for three successive days, provided the cans were tightly sealed during the interval, was successful in sterilizing the food, as was the method of adding over 2 per cent. lemon juice to the food and exposing the cans to boiling water for one hour. The toxin is destroyed by light and air, but maintains its virulence for more than six months if it is sealed and in a dark place. It is not destroyed by the gastric juice. It is destroyed by a temperature of 80 C. for half an hour and by boiling.

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2. Bine, Réné: Boston M. and S. J. **177**: 559 (Oct. 18) 1917.
3. Nevin, Mary: Paper read in abstract before conference of the American Public Health Assn., Sept. 8, 1915.
4. McCaskey, G. W.: Am. J. M. Sc. **158**: 57 (July) 1919.
5. Thom, Charles; Edmondson, Ruth B., and Giltner, L. T.: Botulism from Canned Asparagus, J. A. M. A. **73**: 907 (Sept. 20) 1919.
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A REVOLUTION IN TREATMENT OF CONGENITAL DISLOCATION OF HIP IN YOUNG CHILDREN

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The method for the correction of congenital dislocation of the hip has been in vogue only about twenty years, and up to the time of the innovation which I shall describe, the correction has been done either by the closed method after the style of Lorenz, or by the open method as devised by Hoffa in recalcitrant cases. Both of these methods require a long period of encasement in plaster of Paris, followed by corrective exercises, the duration of the treatment extending over a period of many months.

Chance has placed in my hands a method which has been successfully applied to twenty-five cases and which I wish to present to the profession, this method being used in children up to the age of 2½ years.

In reviewing the literature of the anatomy of congenital dislocation of the hip, we find, according to Drs. S. S. Davis,[1] John Ridlon[2] and Ralph Thompson[3], that before the child has borne weight on the affected limb, the head and the acetabulum are normal and there has been no muscular contraction. It is only after the weight has been borne on the affected limb that the muscles about the hip joint are contracted, the upper dislocation resulting in a stretching of the ligamentum teres; and ultimately the artery accompanying the ligamentum teres fails to functionate, resulting in a malformation of the head of the femur.

1. Davis, S. S.: Am. Med. Aug. 29, 1903.
2. Ridlon, John: N. Y. Acad. of Medicine, March 3, 1904.
3. Thompson, Ralph: Lancet **2**: 777, 1909.

The origin of the method here described dates back to Oct. 17, 1918, when, in the presence of a number of visiting physicians, I replaced, without an anesthetic, a hip that was congenitally dislocated, in a child, aged 2 years. Wishing to demonstrate to one of the visiting surgeons present the simplicity of the replacement of the hip without an anesthetic, I attempted to displace the hip again; but, having failed to do so after a ten minutes' effort, I said I would permit the child to go about without applying the usual plaster-of-Paris fixation and allow the dislocation of the hip to reoccur, so that the following week I might give the visiting surgeon the opportunity of performing the replacement without an anesthetic as I had done. When the child returned, the following week, our surprise was great to see that the head of the femur was fixed firmly in the acetabulum. I was so impressed with this unexpected result that I have attempted this method on all young children with congenital dislocation of the hip, coming under my observation when they first begin to walk. I have so operated on twenty-five patients in the past year, making the correction without an anesthetic.

Of these twenty-five patients operated on, I myself was compelled to place in plaster of Paris one limb that would not remain in the acetabulum, and I know of only one other such case, in which the cast was applied at another institution.

TECHNIC

The pelvis is held fixed by an assistant; the thigh is completely flexed on the abdomen; pressure is made on the knee which brings the head of the femur under the acetabulum, and as the leg is rotated outward in the flexed position, the head of the femur is raised into the acetabulum, with the fingers of the other hand. The whole procedure in these cases is accomplished in less than a minute's time. The child is immediately placed on the ground and allowed to walk; and in one case, a child, aged 2 years, walked seven blocks on leaving the dispensary, immediately following the operation.

It is my intent to make a detailed report of these cases in about a year, at which time roentgenograms will be presented showing the dislocation and the replacement of the hip, and photographs showing the apparent shortening and cure. Sufficient time will have elapsed then to appreciate what percentage of perfect cures can be accomplished by this new method.

The method is not adapted to children that have walked on the affected limb for six months or more: then the old Lorenz method must be resorted to. It is effectual only when the child first starts to walk; and the oldest patient in whom I have been able to make the correction effectually was 2½ years of age.

A number of these cases were reviewed by the fellows of the American College of Surgeons during the recent October meeting.

CONCLUSIONS

From the observations of Thompson, Davis and other anatomists, one may conclude that:

1. Before the child bears weight and develops muscular and ligamentous contraction, the acetabulum and head and neck of the femur are normal in a large percentage of cases.

2. With normal conditions prevailing, there is no reason why the condition should not be regarded and treated as a traumatic dislocation and replaced in the same manner, and the child permitted to go about.

When we compare the large percentage of good results accomplished by this method with those of the Lorenz method, and the great saving of time and mental suffering, this, in the future, must be the method of choice and trial, to be followed by the plaster-of-Paris fixation, if there develops a failure of retention.

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TREATMENT OF GOITER WITH INJECTIONS OF PHENOL, TINCTURE OF IODIN AND GLYCERIN

A FURTHER REPORT OF EIGHTY CASES *

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The injecting of diseased thyroid glands as a means of curing or relieving the pathologic condition has greatly interested us for the past five years. Through the courtesy of Prof. Beaman Douglass of the New York Post-Graduate Hospital, we have been able to observe all cases of goiter coming before us.

Eighty cases of all forms of goiter were injected at regular intervals by us for the past two years, with a mixture of equal parts of phenol (carbolic acid), tincture of iodin and glycerin. The eighty cases represented more than 500 injections. A limited number of the patients were injected with boiling water, but with poor results. We doubt its efficacy and we have discontinued its use.

There were no untoward results from injecting the goiters with the phenol preparations, disproving the statement of some that it is a blind, uncertain and dangerous procedure. It is true if one's technic is not perfect, there is a chance of entering a vein or of injecting too much of the phenol solution, thereby causing symptoms of acute strumitis. In four of the ten patients who were operated on there was some difficulty in separating adhesions between the anatomic and surgical capsule caused by the material oozing out, when the needle was retired from the gland.

The object of the injections is to produce an inflammation, which eventually causes a fibrosis in the gland and the obliteration of that part of the gland injected. After the case has favorably reacted to the treatment, one is able to feel islands of fibrosis. It gives one the feeling of a hobnail liver. The production of a fibrosis in the gland is borne out by the reports of the pathologists, when previously injected patients were operated on and were submitted for examination.

It will be seen from the accompanying table that the injections are particularly suitable in the ordinary parenchymatous goiters of young women. Of fifty-five patients of this type injected, 76.4 per cent. were cured. It relieves the thyrotoxicosis, as in exophthalmic goiter, but unfortunately the relief is only temporary. In fourteen toxic cases, relief was given in 80 per cent. It is of no avail in the cystic or colloid form; in fact, if

* In the Medical Record (**92**: 591 [Oct. 6] (1917) one of us (J. E. S.) published a report on seventeen cases of goiter, the treatment of which was similar to that described in this presentation.

the treatment is persisted in, it may do harm by causing a sudden enlargement of the gland which may seriously interfere with respiration.

The majority of the patients sought relief simply for the swelling in the throat. Some had slight difficulty in swallowing or lifting the arms upward. In other cases the swelling was brought to the attention of the patient by friends or members of the family. The majority of the patients noticed the swelling themselves.

RESULT OF TREATMENT IN EIGHTY CASES IN WHICH PHENOL, IODIN AND GLYCERIN MIXTURE WAS INJECTED *

Type of Goiter	No. of Patients	Cured	Improved	Unimproved
Parenchymatous	55†	42	10	3
Exophthalmic goiter	14‡	..	12	2
Cystic	8	..	..	8
Colloid	2	..	..	2
Adenomatous	1	..	..	1

* The number of injections ranged from three to twenty-six. All the patients were females except one, a male suffering from an advanced form of exophthalmic goiter.
† Fifty of whom were between 12 and 30 years of age.
‡ Eight mild cases, 6 advanced.

ACTION

The treatment causes an inflammation in the gland with a resultant fibrosis. It quiets the heart's action, improves the appetite, has a favorable effect on metabolism, stays emaciation, and reduces the mental irritability.

It is our custom to inject all goiters which are to be operated on, as the relief of the toxic symptoms is a powerful adjunct to the success of the surgical procedure. Patients are put to bed, but are allowed to get up daily for several hours to break the monotony, provided they do not display an excessive degree of thyrotoxicosis. A strict nonanimal protein diet is ordered, and small doses of codein at frequent intervals are given. The object is to produce mental and body quiet. Colonic irrigations of 2 per cent. sodium bicarbonate are given daily, as this is a powerful way of reducing the toxemia.

Two bowel movements should be obtained daily. The patient should have plenty of rest; noon and afternoon rest is insisted on. Plenty of alkaline water should be given. Patients with little means are advised to take plenty of water with the addition of a little sodium bicarbonate. Plenty of outdoor air and sunlight is essential. Tobacco and alcohol are prohibited. A cleansing bath should be given daily to promote perspiration.

Meat and fish are forbidden. Milk, buttermilk and food cooked with milk should be given. No soups are to be made from meat or fish stocks. Eggs, butter, bread, rice, cereals, cooked fruit and especially fruit juices prepared out of ripe fruit, should be given.

Of the fourteen patients with exophthalmic goiter, ten were operated on and all recovered, the results of which I attributed mostly to the preoperative treatment. Four cases of the series of fourteen proved inoperable, but the patients were greatly relieved by the injections and preoperative treatment. A careful history should be taken of all patients presenting themselves for treatment. An exhaustive examination of the throat should be made to determine the form of goiter present, as the injections are of no avail in the cystic or colloid forms.

METHOD

Five drops of equal parts of tincture of iodin, chemically pure phenol and glycerin are injected into the most prominent part of the gland. The needle is plunged directly into the substance of the gland, and the patient is told to swallow. If the needle is in the gland, it will have a wide upward and downward movement during the act. If the needle is extraglandular, no such excursion of the needle will take place. Care should be taken to inject the material very slowly, as hasty injection causes great pain, which may be referred to the ears. Other times it will be referred to the jaw and sides of the neck. There is always some pain, which takes place after the fluid has been injected; but this subsides within a short time. If too much of the material is injected, alarming symptoms of acute strumitis may set in. Some patients feel weak; others may actually faint. The interval of treatment is generally five days, but the frequency of the injections will be in direct ratio to the reaction. Some may accept treatment every three or four days, others between the fifth and seventh day. It is never safe to inject more than 12 drops. After the fifth injection, one can readily determine the progress of the case. In some cases five injections suffice; in others, many more may be needed. In one case of the series of fifty-five, as many as twenty-six injections were given before a cure was effected.

CONCLUSIONS

1. A goodly percentage of parenchymatous goiters will be cured by this method.
2. It relieves the thyrotoxicosis in the graver forms.
3. It is of no use in the cystic and colloid forms, and never should be given.
4. It is a safe procedure if one's technic is not faulty.
5. It is given as a preliminary in all cases going to operation, with the exception of the cystic, colloid and cancerous forms.
6. It is the only hope of relief in the inoperable cases and those in which surgery is refused.

ADDISON'S DISEASE

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The case here reported presents the characteristic syndrome of Addison's disease, together with definite and conclusive necropsy findings confirming the diagnosis of this rare and unusual affection.

REPORT OF CASE

History.—E. L., a Norwegian tailor, aged 48, entered the Easton Hospital, 8:30 p. m., Oct. 28, 1919, complaining of "liver trouble," and extreme and progressive weakness. There was nothing noteworthy in his family history. He had had mumps and whooping cough in childhood; his past medical history was otherwise unimportant so far as known. He had been in fairly good health until about six months before, when he began to experience constant muscular fatigue, independent of exertion, and to be subject to spells of faintness, dull headaches and pain in his shoulders. These spells of faintness were often accompanied by shortness of breath, palpitation, chilliness, nervousness and dull cerebration. There was little or no cough or sputum. He had frequent attacks of indigestion, associated with epigastric pain and occasionally vomiting. His appetite of late had been poor, and his bowels more or less constipated. For the past six months, he had been growing progressively weaker, and on admission his weakness was extreme. Coincidently with the beginning of his weakness, his skin became brownish. The pigmentation was gradual in appearance, and steadily progressed in intensity. He was told by friends that it was due to "liver trouble."

He smoked heavily and used alcohol quite freely. There was no history of venereal infection or of any accidents or operations.

Physical Examination.—The patient was apparently well nourished and well developed. The brownish pigmentation of the skin was more marked on the face, upper chest and hands, and there were many spots of deeper brown on the abdomen. There was slight, if any, pigmentation in the mouth. There was no dropsy or edema, and no glandular enlargements. The pupils were equal, and the reaction to light and distance was good. The conjunctivae were slightly icteric, and the finger nails somewhat cyanosed. The cardiac impulse was neither visible nor palpable. The heart was not enlarged, but its action was very feeble. The first sound at the apex was distant, of poor muscular quality, and was accompanied by a faint systolic murmur, which was not transmitted. Both lungs showed extensive infiltration, chronic in character, especially marked at the apexes. There were harsh exaggerated breath sounds, but no râles. The xiphoid cartilage was unusually prominent, and the costal arches wide and flaring. The abdomen was negative, except for the spots of deeper pigmentation just mentioned. There was a cystic tumefaction over the right instep, and there were some scattered yellowish spots on both feet. The swelling over the right instep was painless, and when it was punctured, clear serum escaped. The patellar reflexes were exaggerated. The blood pressure was very low: systolic 85 mm. of mercury, and diastolic 75 (?). The radial pulses were equal, small and of very low tension. The temperature was 98, the pulse 96, and the respiration 24. The urine showed a faint trace of albumin but no casts. No blood count was made. The patient was put on tincture of digitalis, 5 minims, every three hours, alternated with 1/60 grain of strychnin sulphate subcutaneously. Twenty-four hours after admission the patient became pulseless, went into coma, and died suddenly at 10:30 p. m., October 29.

Necropsy Findings.—October 31, the lungs were found to be anthracotic. The right lung showed numerous miliary tubercles scattered throughout all the lobes, with several small areas of calcification in the upper lobe and a calcareous plaque, about 12 mm. in diameter, at the extreme apex. The pleura on the right side was greatly thickened, and there were adhesions between the costal and visceral layers. Numerous miliary tubercles covered the diaphragmatic surface of the pleura on the right side, and tubercles were also found on the under surface of the sternum. The left lung presented a crater-like ulceration at the apex, about 3 cm. in diameter, with an irregular surface and ragged margins. Section revealed many miliary tubercles, with here and there a calcareous nodule—evidence of healed lesions. The lower lobe and pleura were comparatively free from tubercles. The heart was negative except for some roughening of the mitral leaflets. The abdominal viscera were surrounded by considerable fat. The spleen was about twice its normal size, and on section appeared quite friable, but free from tuberculous deposits. The other abdominal organs, except the suprarenals, showed nothing abnormal.

Suprarenals.—The left suprarenal was many times its normal size, and about three times as large as its fellow on the opposite side. On section, both presented an appearance not unlike that of brain tissue. There was great atrophy of the cortex, and extensive and diffuse fibrocaseous degeneration of the medullary portion, with only minute islands of the original gland tissue remaining. Microscopically, the capsule was seen to be thickened. The histologic distinction of the various zones of the cortical portion could not be made out. A number of small, but typical, tubercles occupied that portion of the cortex corresponding to the zona glomerulosa of the normal suprarenal gland. The medullary portion was the seat of a uniform and diffuse caseation.

COMMENT

This history of a condition with an obscure and insidious onset, with profound and progressive asthenia, general debility, feeble heart action and circulation, low blood pressure, nervous and mental depression, digestive disturbances and a brownish pigmentation of the skin, immediately brings to one's mind the characteristic syndrome of Addison's disease. The finding at necropsy of tuberculosis of the lungs and of the suprarenals, together with enlargement of the spleen, completes the clinical picture of this rare disease. The very low blood pressure was probably due to an alteration, insufficiency or total suppression of the internal secretion of the suprarenal bodies in consequence of their destruction by tuberculosis. The sudden death precluded any attempts at suprarenal treatment. It is doubtful, however, if such therapy could materially influence the course of the disease in a person whose system had been irreparably damaged by grave and extensive lesions of tuberculosis. The strange feature in this case is the absence of a history and symptoms of pulmonary tuberculosis.

CONTROL OF DIPHTHERIA BY CULTURES OF THE NOSES AND THROATS OF SCHOOL-CHILDREN

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The importance of taking swabs from the throats of schoolchildren for the controlling of diphtheria has not been fully recognized by a number of public health officers. In one section of Kansas City, Kan., called Argentine, we have a district that is isolated by natural boundaries. The Kansas River bounds this district on the north and east, while large hills form a natural boundary on the west and south. The retail trade, the milk supply and the school system are all confined within these limits.

Oct. 1, 1919, we had fourteen cases of diphtheria in this district and none in the rest of the city. We took cultures of the schoolchildren, 367 in all, and found thirty-four carriers. One of these was a child who had had diphtheria one month previously and had been released from quarantine after having had only one negative culture. This child had been given antitoxin at the time he was suffering clinically from diphtheria. The physician in charge thought that because antitoxin had been given, the diphtheria bacilli were killed, and the child was safe to return to school.

We placed these carriers in quarantine and required two negative cultures, taken in the homes, from each of these before they could return to school. Only two new cases developed in this community. One was in a child who had had a positive culture, and the other was in the home of a carrier. In the rest of Kansas City, Kan., scattered in all districts, thirty-three new cases soon developed.

The only one of these carriers who was given the antitoxin was the child who developed diphtheria clinically. All the rest cleared up entirely within three weeks, only throat swabbing, gargles and nose syringing being employed. We all doubt the efficacy of this treatment, but we cannot completely disregard our findings in these cases.

CONCLUSIONS

1. The swabbing of the throats of the children should be a measure adopted at the outbreak of a single case of diphtheria in a school.

2. The quarantine of carriers is as essential as is the quarantine of those suffering from diphtheria, in the controlling of an epidemic of diphtheria.

3. Two negative cultures should be required as the minimum from all children who have had a positive culture. A negative culture means something, but does not have the significance that a positive culture has.

4. Antitoxin has a very definite place in giving immunity against diphtheria, but it does not kill the diphtheria bacillus; so those who have had diphtheria may continue to be carriers for an indefinite time, if great care is not taken in getting at least two negative cultures from them.

5. Carriers usually clear up entirely without the use of antitoxin.

A CASE OF CEREBROSPINAL MENINGITIS DUE TO A DIPHTHEROID BACILLUS *

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While the part played by pseudodiphtheria bacilli in pathologic processes has been much discussed, they have not been recognized as the cause of meningitis, and those found in the nose are usually considered unimportant. Cases such as the one reported here are doubtless rare; but they are important in their bearing on the pathogenic possibilities of pseudodiphtheria bacilli.

REPORT OF CASE

A white man, aged 49, admitted to the service of Dr. James B. Herrick, June 20, 1919, with a family and personal history which gave no information bearing on this illness, two weeks before admission had fallen in the bathroom as the result of a shock received from a defective electric fixture. Three days after the fall he began to complain of headache and "seemed feverish." After ten days of persistent headache, he was brought to the hospital.

He was a well developed, well nourished man. The mouth temperature was 104.8 F., the pulse 88, the pharynx was red, the tonsils were small, the teeth were in bad condition and the cervical glands were palpable. There were dulness and subcrepitant râles over the left lower chest anteriorly, and in the axilla. The patient was drowsy, the knee and ankle reflexes were active, and flexion of the neck increased the headache. Roentgenograms of the head revealed no fracture. The erythrocyte count was 3,980,000; the leukocyte, 12,600, and hemoglobin, 65 per cent. The urine contained a trace of serum albumin and some leukocytes, but no casts.

The patient's condition grew progressively worse, and he died five days after admission, on the fifteenth day of the disease.

Spinal puncture on admission yielded a cloudy fluid containing 740 leukocytes per cubic millimeter, 54 per cent. of which were polymorphonuclear neutrophils, and the rest lymphocytes. The sediment was blood tinged. The ammonium sulphate test for globulin was positive, and the colloidal gold test indicated meningitis (0011234432). Wassermann tests of the cerebrospinal fluid in 0.2, 0.5 and 1 c.c. amounts were clearly negative. No tubercle bacilli were found in direct smears of the sediment. A guinea-pig inoculated subcutaneously and intraperitoneally with the sediment, and killed at the end of six weeks, showed no tuberculous lesions. Organisms were found in Gram's stains of direct smears of the cerebrospinal fluid. They were gram-positive, short, diphtheroid bacilli which most frequently occurred in pairs, end to end. They were often within the leukocytes. In methylene blue stains they did not show polar bodies, and were shorter than the usual forms of diphtheria bacilli.

Aerobic and anaerobic goat blood agar slants and agar shake cultures were made of the fluid. At the end of twenty-four hours' incubation, all tubes contained in pure culture the gram-positive bacillus found in direct smears. In the shake culture made with 1 c.c. of the cerebrospinal fluid, the colonies were so numerous that it was impossible to count them. The bacillus grew both aerobically and anaerobically on the surface of goat blood agar, producing a delicate grayish film, or isolated, slightly convex, grayish colonies less than a millimeter in diameter. The blood was not changed. The growth on goat blood agar was more luxuriant than on plain agar or Loeffler's serum. The bacillus grew but produced no acid or gas in maltose, raffinose, saccharose, lactose, salicin, mannite, dulcite, inulin, galactose, or dextrin azolitmin broth. In glucose azolitmin broth, it produced acid without gas. It had no effect on milk. Broth cultures were clear, with a finely granular sediment. In twenty-four hour old cultures the bacillus was not motile.

A guinea-pig inoculated intravenously with two twenty-four hour slants of the original culture died twenty-two hours later. There was a marked fatty degeneration of the liver, and a blood-tinged cerebrospinal fluid, which contained the bacillus in pure culture. Two guinea-pigs were inoculated intraperitoneally with a forty-eight hour broth culture of the organism, and one of them also received diphtheria antitoxin; neither of these pigs died.

Cerebrospinal fluid obtained from the patient three days later showed a negative Wassermann test in 0.2, 0.5 and 1 c.c. amounts. There were no tubercle bacilli in the smears. Cultures contained numerous colonies of the bacillus described. No other organisms were found in any of the cultures.

A blood culture the day following the first lumbar puncture showed about one colony of a gram-positive bacillus from each cubic centimeter of blood. Morphologically and culturally, it was identical with the organism found in the cerebrospinal fluid. A Wassermann test of the blood was negative.

COMMENT

The organism described differs from the diphtheria bacillus in the absence of polar bodies; failure to acidify maltose and dextrin; and in being not pathogenic for guinea-pigs on intraperitoneal injection of a forty-eight hour broth culture.

Eberson[1] has made an attempt to group diphtheroid organisms. He finds that strains isolated from the eye and nose are usually in the nonfermenting or in the glucose splitting group. The bacillus found in this case of meningitis resembles in morphology and staining properties Hofmann's type of pseudodiphtheria bacillus. It constantly fermented glucose with the production of acid. The pathogenicity of the bacillus for guinea-pigs was discovered only by intravenous inoculation: according to the method usually employed for testing the virulence of diphtheroids, it would be classed as nonvirulent.

On the whole, it is probably best considered as a pseudodiphtheria bacillus closely related to that described by Hofmann. It may be pathogenic for man, as in this case it was doubtless the cause of the fatal meningitis; and is pathogenic for guinea-pigs on intravenous, but not on subcutaneous or intraperitoneal inoculation.

637 South Wood Street.

1. Eberson, Frederick: J. Infect. Dis. **23**: 1 (July) 1918.

* From the John McCormick Institute for Infectious Diseases and the Presbyterian Hospital.

Diagnosis of Tuberculosis.—The diagnosis in the early stage of tuberculosis must and should often be made before the bacillus can be found in the sputum and before the examination of the chest can give any help.—*Bull. Maine State Dept. of Health*, October, 1919.

A PLASTIC OPERATION FOR THE CURE OF URETHRAL STRICTURE

MAXIMILIAN STERN, M.D.

NEW YORK

In view of the fact that external urethrotomy can never promise a lasting benefit and is never performed with the hope of effecting a cure, it is my opinion that it should be replaced by an operation that is logical to that end.

Russell's partial resection, Marion's radical resection and Cabot's plastic operation are operations which have advantages over external urethrotomy, but which are more or less difficult of performance, because of injury to the corpus spongiosum which causes hemorrhage and obscures the field.

In a previous communication[1] I reported four cases of urethral stricture, with acute retention of urine, treated without external urethrotomy, and I made reference to an operative procedure, which I thought, at that time, promised lasting results.

In that communication there was a report of one case of urethral stricture in a patient on whom previous external urethrotomy had been performed and who had a frankly cicatricial stricture at the bulb. With the operation that I am about to describe, this patient was apparently cured, as a recent examination has proved.

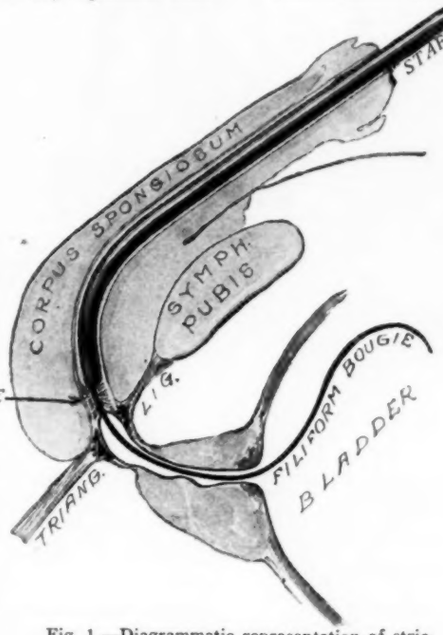

Fig. 1.—Diagrammatic representation of stricture at bulbomembranous junction; staff in urethra arrested at stricture; filiform through stricture into bladder. The corpus spongiosum overlying the stricture and attached to superficial layer of the triangular ligament will be noted.

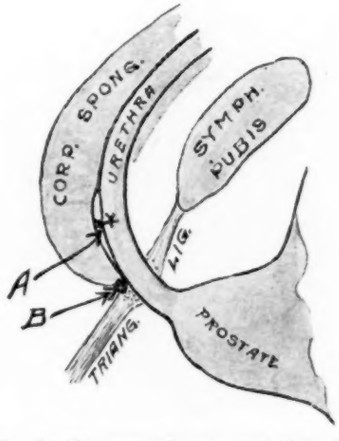

Fig. 2.—Diagrammatic representation of finished operation: *A*, stricture excised and sutures in place; *B*, corpus spongiosum replaced over urethra and sutured.

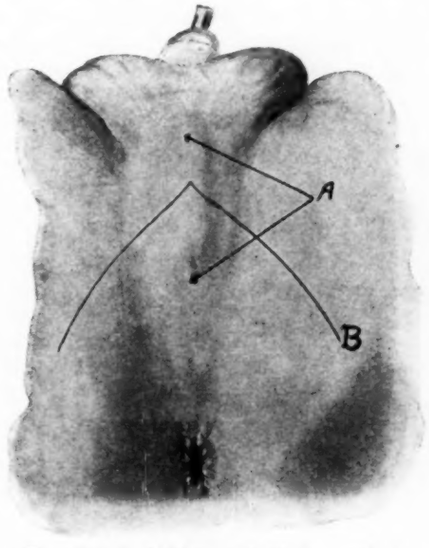

Fig. 3.—*A*, bulging caused by staff in urethra, the lower arrow corresponding to beak of staff at stricture; *B*, inverted V incision, its apex well above stricture.

PURPOSE OF THE OPERATION

By the method that I am about to describe it is purposed to excise the strictured floor at the bulbomembranous junction without inflicting injury to the overlying structures or to any other portion of the urethra.

Figure 1 indicates the location of strictures most commonly encountered in their relation to the anatomic structures overlying and to the triangular ligament.

The muscle structures are separated, thus exposing the corpus spongiosum, as subsequent illustrations will show. The corpus spongiosum is detached from the triangular ligament and elevated from the urethra, thus exposing the strictured area. This is excised and a repair is made in a horizontal direction, thus preventing any diminution in the lumen of the urethra. The structures overlying are then restored to their normal positions, as indicated in Figure 2. With the indwelling catheter in the urethra for several days and the several layers of tissue securely sutured over the urethral wound, primary union is logical and no escape of urine through the perineal wound should occur.

PREOPERATIVE PREPARATION OF THE PATIENT

In patients presenting themselves with acute retention of urine and in an anxious and desperate state incident to many sleepless nights and vain endeavor to micturate, it seems inadvisable to introduce the additional risk of an ether narcosis. In such extreme cases the preliminary introduction of a ureteral catheter through the stricture with the aid of the author's instrument, as described in another communication,[2] will be found a valuable preoperative measure.

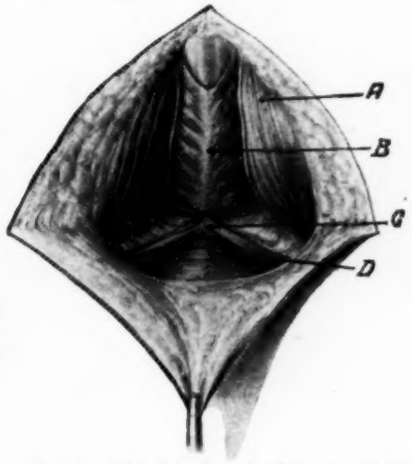

Fig. 4.—Skin flap turned down, exposing structures overlying corpus spongiosum: *A*, ischiocavernosus muscle; *B*, bulbocavernosus muscle; *C*, junction of the superficial transversus perinei and bulbocavernosus muscles on corpus spongiosum; *D*, levator ani muscle.

Since that time an operation has been performed in like manner in six other cases that were not amenable to palliative measures, with results that have seemed perfect.

1. Stern, Maximilian: Four Cases of Urethral Stricture with Acute Retention of Urine Treated Successfully without External Urethrotomy, Internat. J. Surg. **32**: 180 (June) 1919.

2. Stern, Maximilian: The Easy Penetration of Urethral Strictures: Operating Urethroscope of the Gerringer Type, J. A. M. A. **73**: 1360 (Nov. 1) 1919.

The rehabilitation of the patient and the amelioration of cystitis and urethral edema will do much toward making a radical operation successful. These can be accomplished only by giving the patient several days of respite from his vesical urgency. Through a ureteral catheter the urine dribbles away into a receptacle, and uninterrupted sleep can be obtained.

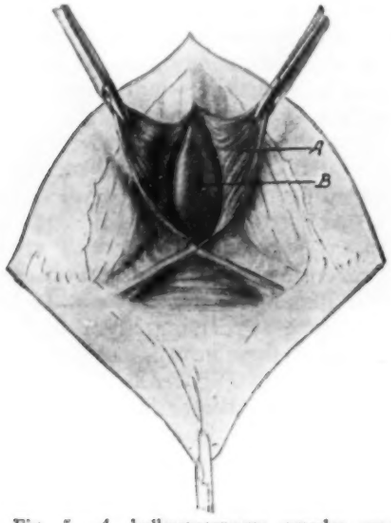

Fig. 5.—*A*, bulbocavernosus muscles separated and held apart, permitting corpus spongiosum (*B*) to protrude.

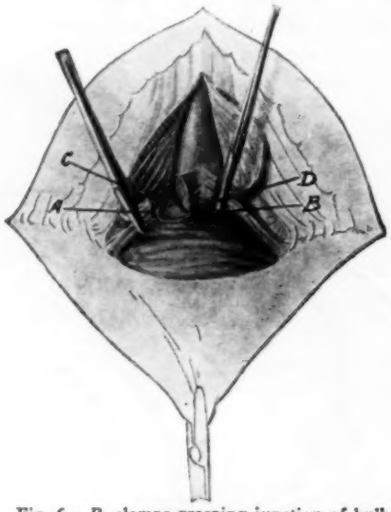

Fig. 6.—*B*, clamps grasping junction of bulbocavernosus and superficial transverse perinei muscles near their attachment to corpus spongiosum; *A*, right side severed, exposing *C*, superficial layer of the triangular ligament; *D*, muscle stump remaining attached to corpus spongiosum.

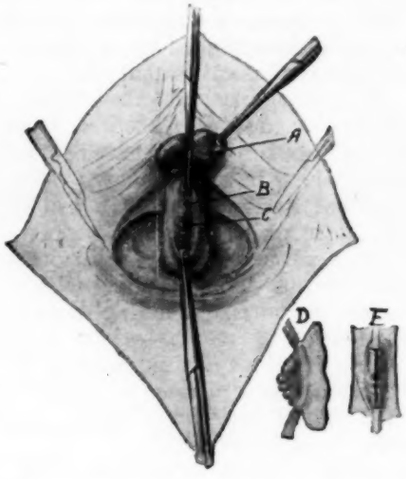

Fig. 7.—*A*, corpus spongiosum elevated, exposing urethra; *B*, beak of staff engaged in stricture in urethra throwing it into folds, *C*; *D*, same, lateral view; *E*, Allis clamps placed above and below stricture and line of incision.

At the apex of the denuded area, the bulbocavernosus muscles are separated from above downward in a median line, the corpus spongiosum being avoided, while care must be taken not to puncture the structure (Fig. 5).

These muscles cleave easily from the corpus spongiosum, as far downward as the superficial transversus perinei muscles. At this point they are firmly fixed with the superficial transversus perinei muscles to the corpus spongiosum. A hemostat is placed so as to grasp the insertion of these two muscles on either side and an incision is made mesial to the hemostats, so as to leave a muscle stump attached to the corpus spongiosum (Fig. 6). Two lateral spaces now appear beside the "butt-end" of the corpus spongiosum, into which the finger easily penetrates to the superficial layer of the triangular ligament, and it will be observed that the cor-

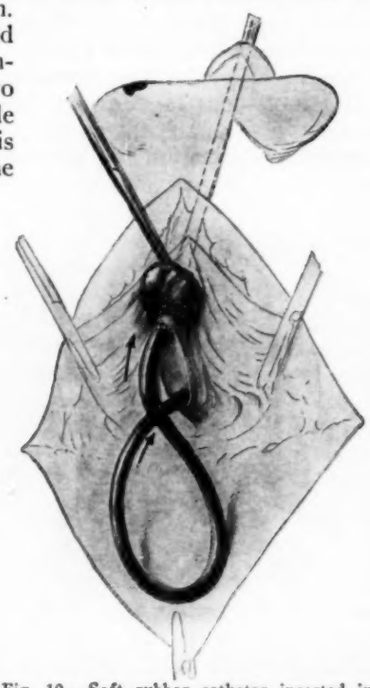

Fig. 10.—Soft rubber catheter inserted into bladder; open end of catheter slipped over beak of staff about to be drawn up through urethra.

The back pressure on the kidneys is relieved and the general condition of the patient is improved.

THE OPERATION

The patient is placed in an exaggerated lithotomy position, with a sandbag under the buttocks, in order to bring the perineum into a higher plane than a vertical one — almost approaching the horizontal. An inverted V incision is made, the apex of which corresponds to a point about 1 inch above the position of the beak of the staff in the urethra, its lower arms extending nearly to the tuber ischii (Fig. 3). The skin flap is dissected carefully, so as not to injure the thin muscle layers overlying the corpus spongiosum (Fig. 4).

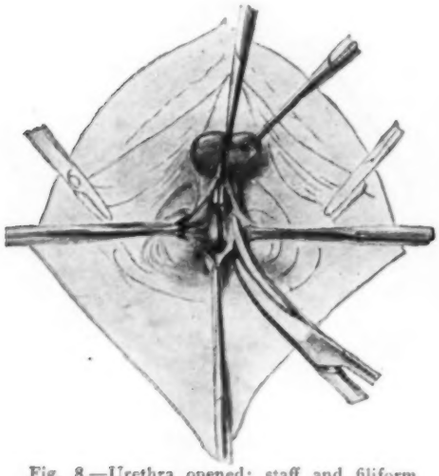

Fig. 8.—Urethra opened; staff and filiform exposed; left stricture bearing flap being removed.

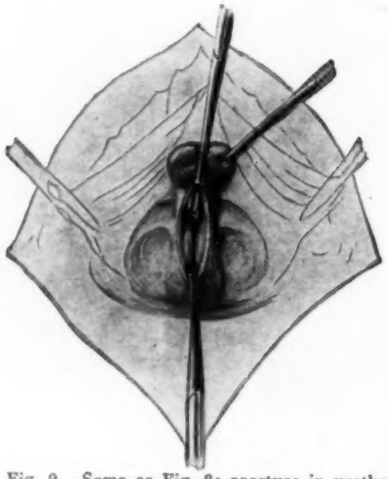

Fig. 9.—Same as Fig. 8; aperture in urethra after removal of stricture tissue may be seen.

pus spongiosum is fixed to this structure. With the aid of scissors the elevation of the corpus spongiosum from the triangular ligament and from the urethra itself is easy of accomplishment. This procedure is carried as far as may be necessary, that portion of the urethra in which the staff is arrested and a short distance above it, being thus exposed. The strictured urethra is now exposed to view, and when the tip of the staff is pressed downward the urethra below the point of engagement will pucker in advance of it (Fig. 7).

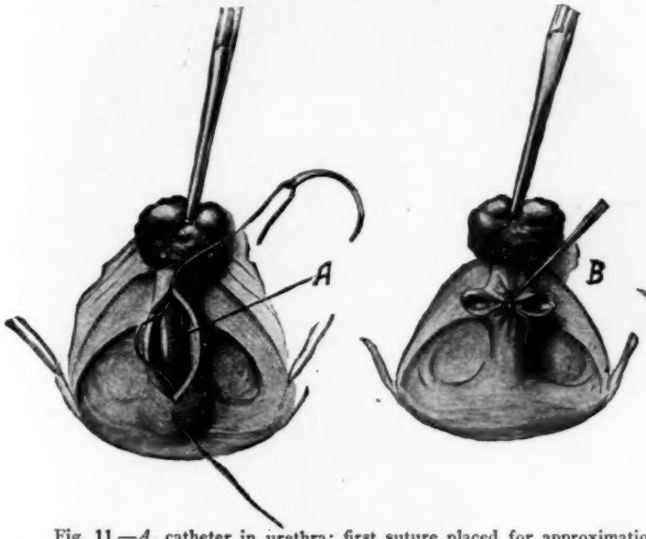

Fig. 11.—*A*, catheter in urethra: first suture placed for approximation of upper and lower angle of wound; *B*, suture tied.

Two Allis clamps grasp the urethra, one above the strictured area and the other well below it. A linear incision in the midline is made between these two points, by which the strictured area is opened. Allis clamps are attached to the free edges, the interior of the urethra being thus exposed, while the beak of the staff and the filiform are brought into view (Fig. 8). These two lateral flaps are removed with scissors, an ovoid fenestra being left in the urethra (Fig. 9). A rubber catheter, size 22 F., is now inserted into the bladder and the filiform removed. The open end of the catheter is slipped over the beak of the staff, and withdrawn through the urethra (Fig. 10). Urethral repair must now be made. It will be found that there is ample urethral tissue for the transverse repair without causing even slight tension (Figs. 11 and 12).

REPLACEMENT IN THEIR NORMAL POSITIONS OF ALL THE STRUCTURES OVERLYING THE URETHRAL WOUND

1. The corpus spongiosum is attached to the superficial layer of the triangular ligament by two sutures of fine catgut.

2. A single suture is placed in such a manner (Fig. 13) as to bring the two bulbocavernosus muscles and the transversus perinei muscles in apposition with the muscle stump remaining on the corpus spongiosum. This suture also includes the levator ani, which frequently drops away when the transversus perinei muscles are severed.

When this suture is tied, the structures are restored to their original positions and the union of the bulbocavernosus muscles completes the muscular repair (Fig. 14).

The skin flap is now replaced with interrupted silk or linen sutures. It will be observed that there are three distinct coverings over the urethral wound. The close apposition of these structures may be confidently expected after from forty-eight to seventy-two hours, during which time the catheter remains in the urethra. After the expiration of this time, no urinary leakage is to be expected, and the patient is permitted to void.

Fig. 12.—Urethral repair completed.

POSTOPERATIVE TREATMENT

The indwelling catheter is fixed to the glans so that the eye of the instrument is situated just inside the internal vesical sphincter and fastened with an elastic device manufactured for that purpose, or by any of the methods improvised by urologists. It is allowed to remain in situ for forty-eight hours, the patient being cautioned during this time not to make any urinary effort. At the expiration of forty-eight hours the catheter is slowly withdrawn, while a gentle stream of hot boric acid solution is flowed through it. A sterile catheter is then inserted and allowed to remain twenty-four hours. This concludes the third postoperative day. On the fourth postoperative day the patient is catheterized every four hours or when request is made. On the fifth day, voluntary micturition is permitted.

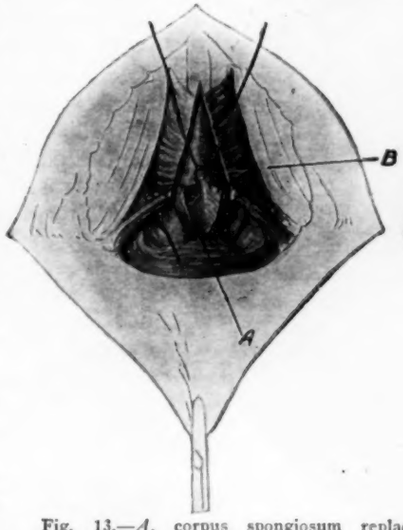

Fig. 13.—*A*, corpus spongiosum replaced over urethral wound and sutured to superficial layer of triangular ligament *B*, single suture so placed as to restore all muscle structures to their original positions over "butt-end" of corpus spongiosum.

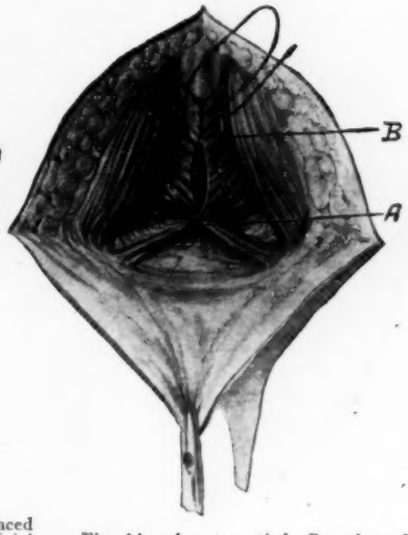

Fig. 14.—*A*, suture tied; *B*, union of bulbocavernous muscles.

The care of the perineal wound includes certain important considerations in order to accomplish primary union. In a moist, bacteria-laden area, frequent changes of dressings must be made and perspiration prevented, if possible by avoiding heavy bedclothes.

Immediately after the operation, it is my practice to cover the operative field with an unguent, comprising paraffin, wax and petrolatum, which acts not only as an occlusive covering, but also as an antiseptic, in that it envelops any organisms present in the skin and renders them inert.

A sound (24 F.) is passed on the tenth day, and one of larger size a week later. It is my experience that no further instrumentation is necessary.

CONCLUSIONS

1. Since all, or nearly all, strictures occur anterior to the superficial layer of the triangular ligament, this operation can easily reach them. Extravasation of urine or infiltrating abscesses are not to be feared in a surgical procedure that does not disturb the membranous or prostatic urethra lying posterior to the triangular ligament.

2. An operation which is directed precisely to the diseased area, and which does not inflict injury to any other part of the urethra, must be conceived as a logical step toward a cure, and as superior to procedures heretofore in vogue.

219 West Eighty-First Street.

CARCINOMA OF THE EXTERNAL EAR

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KANSAS CITY, MO.

To the uninitiated, the successful treatment of early, superficial carcinoma of the external ear may seem a comparatively simple matter; but after one has acquired a little experience in combating even the milder type of the disorder in this region, a pessimistic attitude generally replaces the former optimistic one.

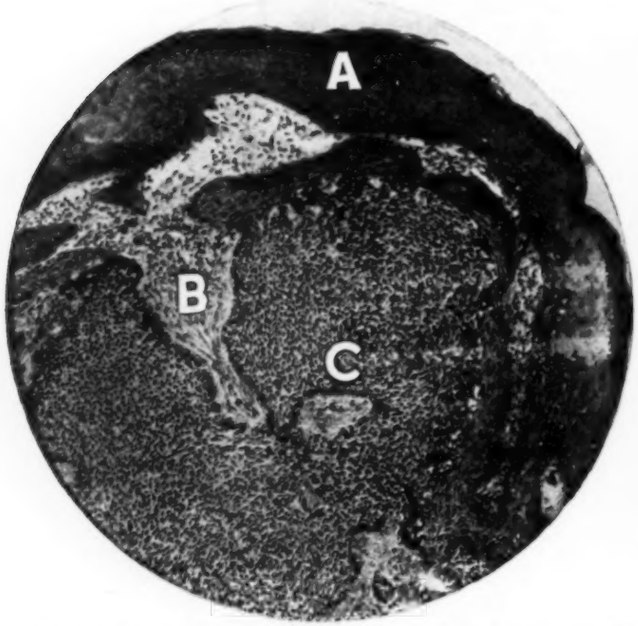

Fig. 1.—Basal-cell carcinoma of helix: *A*, epidermis; *B*, connective tissue of derma; *C*, masses of cancer cells; hematoxylin-eosin stain; low magnification.

The difficulty of bringing about a cure in these cases is largely due to the fact that the skin lies very close to the cartilage; and even if the latter escapes direct cancerous involvement, the chronic inflammatory changes to which it is subjected, together with the poor blood supply, prevent prompt healing, even after the removal of the parent cause of the trouble.

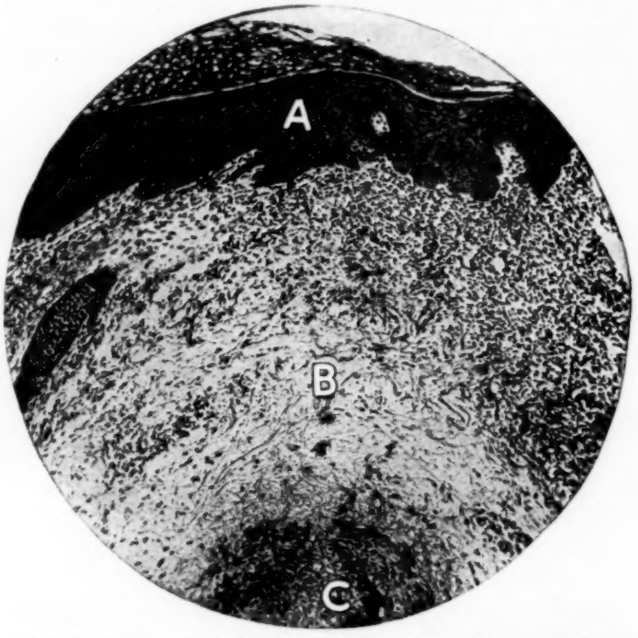

Fig. 2.—Very early basal-cell carcinoma of ear, showing effects of radium treatment: *A*, cellular infiltration; *B*, changes in connective tissue; elastic fibers broken and twisted; *C*, cartilage; hematoxylin-eosin stain; low magnification.

During the past two years, I have had opportunity to study seventeen cases of carcinoma of the ear. All the patients were men. The youngest was 28, the oldest 81 years of age. In five cases studied microscopically, all the growths were of the basal-cell type.

Owing to the character of the structures involved, the histologic picture differs in some minor respects from that seen in basal-cell carcinoma of other parts of the body.

In thirteen instances, the growths had developed from seborrheic keratoses, usually of the keratotic variety, and in nearly every case there was a history of primary injury, such as a cut or a bruise. Eleven of the patients, at one time or another, had suffered from frost-bite.

All the lesions developed at some point above the level of the floor of the external auditory meatus. In no instance was the lobe primarily involved. The upper portion of the helix was a favorite site for the development of the lesions, probably because of its exposed position. Occasionally the cranial surface of the pinna was attacked, in one instance following an injury from a spectacle bow, and in another a slight cut from a razor, inflicted by a barber while trimming the hair.

There was a striking similarity in the case histories. Following a slight injury of the ear, generally at some point on the helix, the patient developed a small, superficial ulcer, which healed very slowly. The retarded healing was, in a measure, the fault of the patient himself. If the scab was not deliberately scratched off, because of the slight irritation to which its presence gave rise, it was accidentally rubbed off by the too vigorous use of a rough towel. Finally, the lesion apparently healed, but a small keratosis developed at the site of the former wound.

The growth of the little hyperkeratotic tumors may have been retarded by the frequent application of grease or petrolatum; but in the course of months or years, a large percentage of them became malignant. The subjective symptoms were at first comparatively slight, and consisted of itching and burning of variable degree, easily allayed by a mild antipruritic. Later, as the carcinoma developed, and the deeper structures were invaded, the patients frequently complained of a throbbing, penetrating pain, which often involved the entire side of the head, and which only narcotics would relieve.

The plan of treatment varies with the character, stage and extent of the lesion. In growths of the prickle-cell type, early and radical excision is the best and safest course. The basal-cell tumors are less serious, and more weight can be given to the importance of a good cosmetic result when it comes to dealing with them.

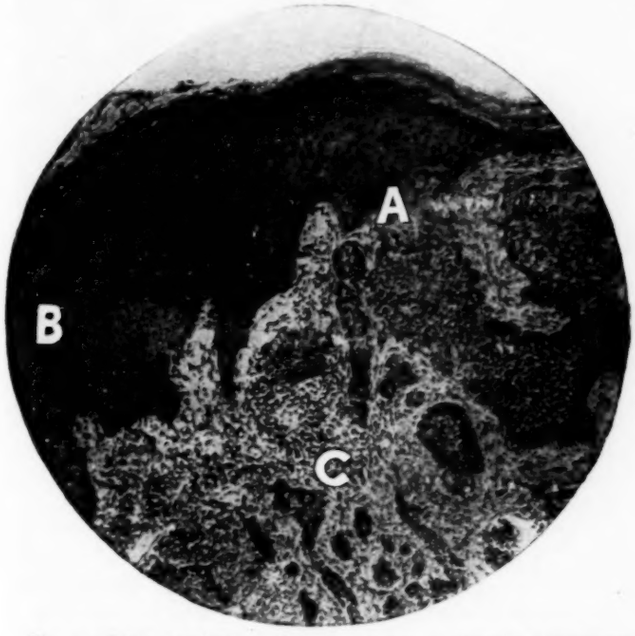

Fig. 3.—Early basal-cell carcinoma of ear: *A*, strand of cancerous tissue extending downward from basal layer of epidermis into corium; *B*, thickened prickle layer; *C*, derma, with masses of new growth lying between the bundles of connective tissue; hematoxylin-eosin stain; low magnification.

As a prophylactic measure, the ears should be suitably protected from cold during the severe winter months. Frost-bite may not be a direct causative factor, but repeated injury from this source undoubtedly predisposes to cancer.

Even slight lacerated wounds of the ear should receive proper surgical attention. In treating rough, jagged injuries of the skin, the edges should be pared down and carefully approximated, and the wound properly closed and dressed.

Seborrheic keratoses, which are often the precursors of the more serious lesions, can sometimes be successfully combated by the daily use of a mild keratolytic, such as salicylic acid ointment (10 per cent.). Also carbon dioxid snow is a valuable remedy in some instances, although its field is limited, and in suspicious or advanced lesions, more harm than good is liable to follow its use. This is due largely to the fact that its destructive action is not that of a direct escharotic, but a sequel to the acute inflammatory changes that follow intense refrigeration.

The widely dilated vessels, together with the lowered vitality of the immediately adjacent tissues, tend to extension rather than eradication of the lesions attacked. The actual cautery is a much better agent

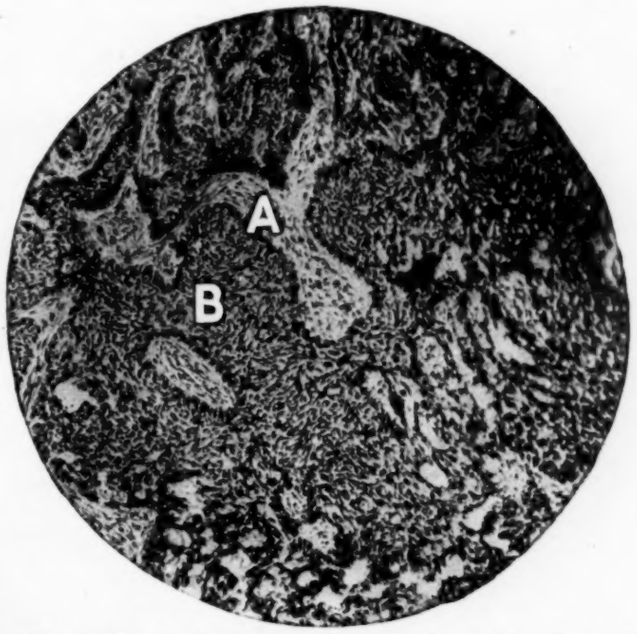

Fig. 4.—Late basal-cell carcinoma of ear: *A*, connective tissue of derma: only a bridgework remains; *B*, masses and strands of cancer cells penetrating the fibrous network; hematoxylin-eosin stain; low magnification.

in these intermediary or frankly malignant cases. The destruction of the lesion is certain, for, as Hazen, Bloodgood, MacKee and others have shown, the efferent vessels are promptly sealed off, and the liability to

Fig. 5.—Late basal-cell carcinoma of ear, showing involvement of cartilage at *C*: *A*, disorganized strands of connective tissue; *B*, irregular masses of cancer cells; hematoxylin-eosin stain; moderate magnification.

peripheral extension is reduced to a minimum. Unfortunately, the tissues in this vicinity do not heal very promptly following actual cauterization, and the ensuing burns are frequently a source of extreme discomfort to the patient. Fulguration is painful and, as

ordinarily practiced, unreliable. Of the various chemical caustics, arsenous oxid, as recommended by Robinson, is probably the best; but when employed in this locality, it is open to the same objection as the actual cautery.

Prior to the involvement of the cartilage, many of the cases respond very satisfactorily to roentgen-ray treatment and especially to radium. If the former agent is employed, only the intensive method should be used, otherwise the result is liable to be disastrous rather than beneficial. I once saw a case of superficial carcinoma of the concha which at the time could readily have been successfully removed by a competent surgeon in about fifteen minutes. Nine months later, I again saw the case, but during the interval the patient had received more than a hundred brief roentgen-ray exposures in and around the affected area. The combination proved too much for him, however, and the man died.

In the treatment of basal-cell carcinoma of the ear by means of radium, a severe reaction is seldom necessary, and in the superficial cases should always be avoided. The skin in this region is very thin, and affords only slight protection to the underlying structures. The inflammatory changes that occur as a result of prolonged exposures subside very slowly, and weeks or even months may elapse before the ulcer marking the site of the former carcinoma is entirely healed. The healing process can sometimes be expedited by the cautious use of liquor hydrargyri nitratis, a remedy first suggested to me by my friend, Dr. T. S. Blakesley. The agent is applied by means of a tooth-pick, and its action is promptly halted at the end of one or two minutes by a liberal coating of sodium bicarbonate. Occasionally, diluted citrine ointment (unguentum hydrargyri nitratis, 1 part; petrolatum, 7 parts) will prove helpful at this stage of the disorder. Cleanliness is essential, for, as Dr. Du Noüy has said, the ideal conditions of perfect and rapid healing are realized when a wound is kept practically sterile, or deprived of pathogenic micro-organisms, as cocci, diplococci and streptococci.[1]

In those cases presenting cartilaginous involvement, I have found both radium and roentgen-ray treatment useless. Prompt excision is the best and safest plan, and in the hands of a skilled operator, the results are generally good. As a rule, the ensuing deformity is comparatively slight, and the patient is promptly relieved of a disorder that is liable ultimately to prove both distressing and dangerous to life.

Fig. 6.—Basal-cell carcinoma of ear involving cartilage of eighteen months' duration; very painful.

Fig. 7.—Multiple basal-cell carcinoma of the ear; of three years' duration; no lymph node involvement; radical operation, followed by cure.

Fig. 8.—Carcinoma of the ear, showing ulcer that remained after radium therapy. Lesion healed under the action of soothing local applications in seven weeks; no recurrence had taken place one year later.

Fig. 9.—Basal-cell carcinoma of the ear in a man of 70; the growth was destroyed by means of radium, but the lesion healed very slowly, and was extremely painful.

Fig. 10.—Seborrheic keratosis on helix which developed following slight cut from razor and ultimately became malignant.

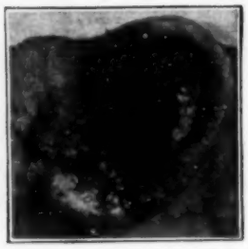

Fig. 11.—Early basal-cell carcinoma of ear, showing condition after patient had received more than 100 exposures to the roentgen ray.

1. Du Noüy, P. L.: Am. J. Physiol. **49**: 121 (June 1) 1919, cited in The Search for Cicatrizing Substances, editorial, J. A. M. A. **73**: 428 (Aug. 9) 1919.

Altruism.—Sympathy for manifest evils, and self-sacrifice for others have no limit when the emotions are directly stimulated.—Brend.

TUMORS OF THE BLADDER

THEIR DIAGNOSIS AND TREATMENT

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AND
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CHICAGO

Tumors of the bladder comprise but a small percentage of all the tumors of the body, this being variously estimated at from 0.75 per cent. to as high as 5 per cent. of the total number. Of these, approximately one half are malignant, and most of the remainder potentially so, in that they later become malignant.

TYPES OF BLADDER TUMORS

There are two common varieties of bladder tumors: papilloma and carcinoma. The papillomas are fibrous, benign or malignant, and the carcinomas adenoid or diffuse, adenomas being very rare.

Besides these common varieties of epithelial origin, other types of tumor are found occasionally, including myomas, angiomas, fibromas and various types of sarcomas. The papillomatous growths, benign or malignant, are by far the commonest form of tumor found in the bladder. Ewing[1] states that this is due to the structure of the mucous membrane and the physical conditions to which the tumors are exposed. The transitional type of epithelium accounts for the histologic varieties of tumors arising from it. The villous form is probably due to muscular activity and the constant bathing in fluid. Ewing further states that the long confinement of these tumors to the site of origin is probably due to their villous form rather than to a lack of lymphatics, which was once thought to be the reason.

Bladder papillomas occur in various forms, coarse or fine villous growths with more or less narrow pedicles, flat or lobulated forms, or they may be sessile. Papillomas vary greatly in size and are frequently multiple. The commonest location is in the trigonal area, especially about the ureteral orifices and the edges of the trigon. They have been observed at all periods of life, but are commonest after middle life, especially in the sixth decade. They occur about three times as frequently in men as in women. Their course is prolonged, and they have a tendency to remain confined to the bladder. A few of them remain benign for many years, but most of them become malignant eventually. Many are malignant from the beginning.

THE DIAGNOSIS OF MALIGNANCY

The question of malignancy is the all-important point in diagnosis. If a tumor is benign it can be removed by fulguration, and recurrences or additional tumors appearing later can usually be removed by the same means, whereas if it is malignant it is usually resistant to fulguration, and other or additional means must be used. The macroscopic appearance of a tumor is not a certain guide in judging its malignancy. However, there are certain characteristics which may be taken as evidence of malignancy in papillary tumors, as necrosis or sloughing, calcific incrustations, edema about the base of the growth, nodules in the mucosa near the growth, the presence of an intractable cystitis, an induration felt through the vagina or rectum, and multiplicity or great size and the slow response to fulguration. The sessile growths and the flat warty or the extensive velvety patches on the wall of the bladder are quite sure to be malignant. If a piece is removed through the cystoscope for examination, it may have benign characteristics even though the pedicle or base may be actually malignant. However, the removed portion may show actual malignancy. Then, of course, the diagnosis is assured. The removed portion may not show well-defined malignant characteristics and still give evidence of malignancy by exhibiting unusual growth capacity. Buerger[2] gives, in addition to the usual well-defined microscopic evidences of malignancy, these morphologic criteria on which the diagnosis of carcinoma or carcinomatous change in papillomas may be made: "Cells manifesting irregularity in size and shape; nuclei rich in chromatin, deeply staining and of bizarre shape; cells with atypical mitosis; giant cells and multinucleated cells."

Extension of malignant tumors may occur through the bladder wall to other pelvic structures, up the

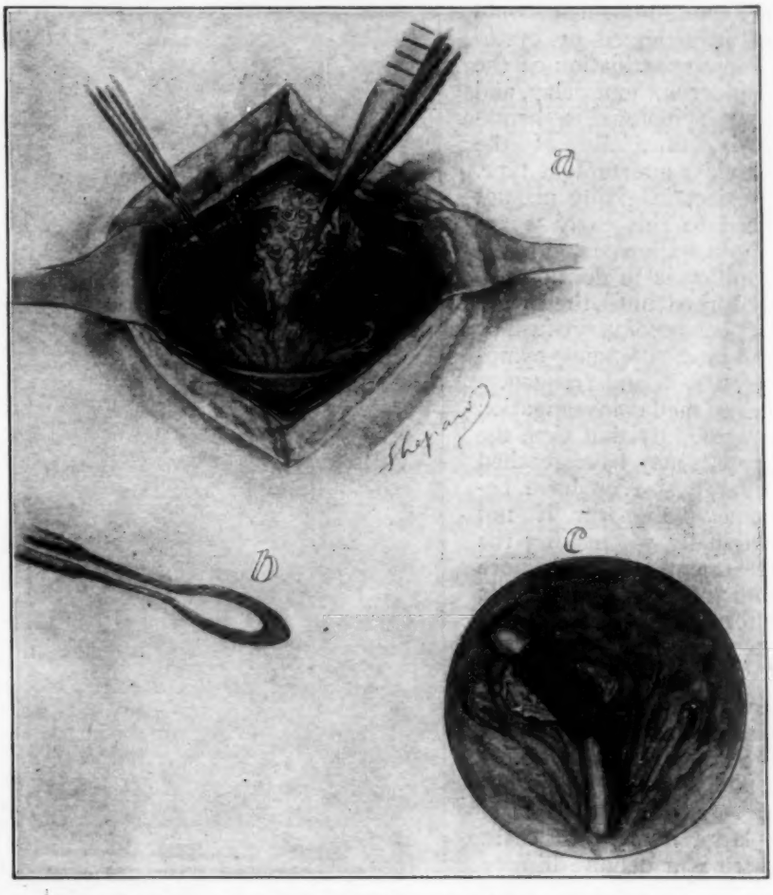

Fig. 1.—Excision of papilloma of bladder with electrocautery knife: *a*, method of grasping pedicle of tumor with forceps and excising it with electrocautery knife; *b*, electrocautery knife; *c*, method of applying radium to former site of tumor.

1. Ewing, James: Neoplastic Diseases, Philadelphia, W. B. Saunders Company, 1919.

2. Buerger, Leo: Tr. Am. Urol. A. 9: 14, 1915.

ureter to the kidneys, and along the pelvic lymphatics to the prevertebral lymph nodes. Cases of metastases from bladder tumors have occurred in remote organs; but such metastases are comparatively rare and occur late.

Bladder tumors may be complicated by secondary anemia from hemorrhage, by cystitis, by hydronephrosis complicating tumors which may occur about or within the ureteral orifices, and by renal suppuration. Serious kidney complications may occur in those cases, benign or malignant, wherein blood clots or fragments or parts of the tumor interfere with the emptying of the bladder resulting in back-pressure from retention.

There is one dominating symptom which should be investigated by cystoscopic examination of the bladder without delay, and that symptom is hematuria, especially of the painless intermittent type. Neglect in giving prompt heed to this early warning has allowed too many papillomas to develop undisturbed until the bleeding has become profuse or the later attending symptoms, pain and frequency, have made investigation urgent. By that time the growth may have reached a large size or have become malignant, if not originally so, making the treatment not only more difficult, but too often less effective.

ETIOLOGY

The etiology of bladder tumors, like that of neoplasms in other parts of the body, is not definitely established; but many observers have noted that in a large number of cases there is a definite history of an irritation of some kind, as cystitis or stone. Bladder tumors appear to be common in anilin workers. These observations seem to indicate that irritation may predispose toward the formation of the growth.

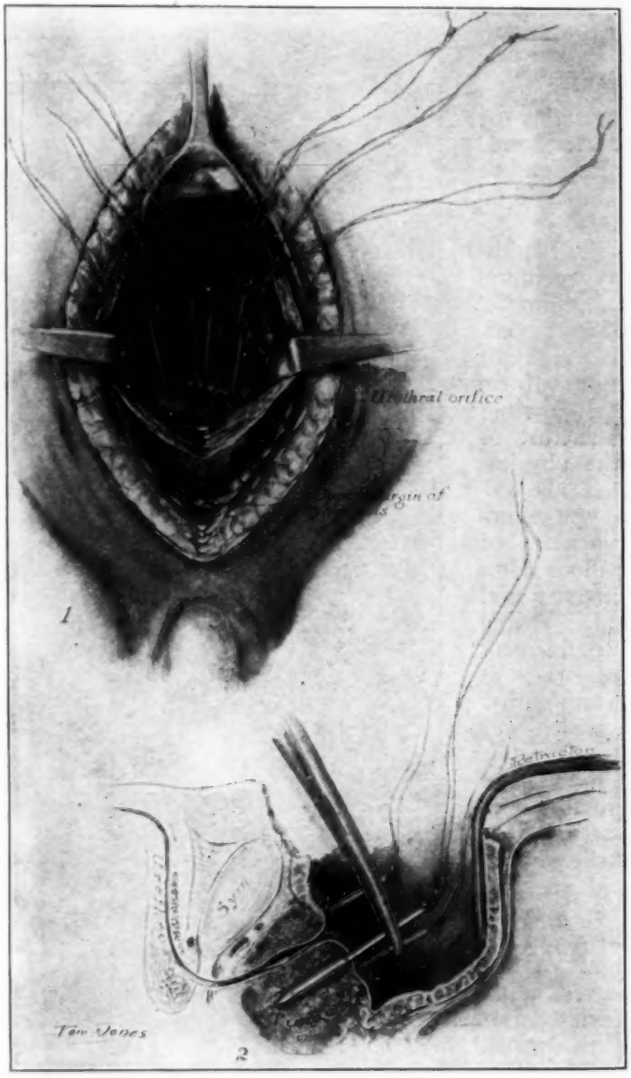

Fig. 2.—Carcinoma of the prostate: 1, radium needles inserted into prostatic tumor through cystotomy incision; 2, schematic sagittal section illustrating the direction in which the needles are pushed, and the depth to which they are carried.

Besides these primary growths of the bladder, secondary growths are not uncommon, spreading from the kidney, abdominal or pelvic viscera, and especially from the prostate.

TREATMENT

The treatment of bladder tumors has been more or less discouraging in the past, especially before the day when cystoscopy made early diagnosis possible. The choice of method to be used should be based on the pathology of the tumor. This, as we have stated, cannot always be determined accurately. If the tumor is thought to be benign, there is no question but that the fulguration method described by Beer in 1910 gives the best results with the least discomfort to the patient and the lowest rate of recurrences. This method is carried out by means of the high frequency current used through an operating cystoscope. The two types of current used in this procedure are the Oudin and the d'Arsonval. The Oudin, or monopolar spark, produces cauterization and coagulation through its marked local action at the point of application. The d'Arsonval, or bipolar spark, has a deeper and less local action, producing coagulation by heat and a more extensive destruction. For this reason it must be used with more caution, especially when its action is directed to the base of the tumor close to the bladder mucosa, in order to avoid too deep destruction of the bladder wall. These fulguration treatments are repeated at intervals varying from five days to two weeks, depending on the local reaction following each treatment and the progress made. Almost all benign papillary growths are readily removed by this method, and even some of the malignant papillomas are wholly removed, though usually more slowly and with greater likelihood of recurrence.

Surgical removal of both benign and malignant bladder tumors is attended by a large number of recurrences. It seems that fragments of the tumor even of the benign type are readily transplanted, producing recurrences either at the original site or in other parts of the bladder. Gardner,[3] in an analysis of 666 cases of bladder carcinoma, shows that in 224 cases of partial resection of the bladder there were recurrences in 43.7 per cent. of the cases; while in 442 cases in which only the growth was excised, the percentage of recurrences was 88. Comparison of these two surgical methods shows that the more radical removal gives the better results. Total cystectomy in these cases is very discouraging, as there is not only a very high immediate mortality but the results otherwise are not favorable. Gardner[3] reports ninety-six cases of benign papillomas removed by excision with recurrences in 35.5 per cent., while in sixty-

3. Gardner, J. A.: Tr. Am. Urol. A. 9: 226, 1915.

one cases treated by fulguration only 13.1 per cent. recurred. This shows a decided advantage in favor of the fulguration method in benign papillomas.

Radium has now been used for a number of years in the treatment of malignant bladder tumors; and the results, while far from being satisfactory, have been somewhat encouraging. The unsatisfactory results are partly due to faulty application of the radium. As radium acts in proportion to the inverse squares of the distances from the tissue acted on, it is obvious that it must be placed directly on the tumor or inserted into the mass to get the maximum effect. It may be applied in a specially constructed sound or cystoscope and kept in place on the tumor by holding the instrument with special clamps designed to keep it from moving (Young).

AUTHORS' PROCEDURE

Our usual procedure with a tumor thought to be malignant, if located in an accessible part, is to excise the growth and with it resect the entire bladder wall of that region, using an electrocautery knife in preference to the ordinary scalpel. Those tumors located in parts of the bladder not easily accessible, such as the trigon about the internal urethral orifice or closely associated with the ureters, are excised through the open bladder, carrying the incision down to the muscularis (Fig. 1 *a*), using the electrocautery knife (Fig. 1 *b*), following which radium is applied (Fig. 1 *c*) to the denuded surface from which the tumor has been removed.

Sessile growths and those with broad pedicles may be treated by introducing needles containing radium directly into the growth. When this is not possible, the radium may be applied on a staff or sound either through a suprapubic opening or through the urethra, care being taken to keep it in contact with the involved area.

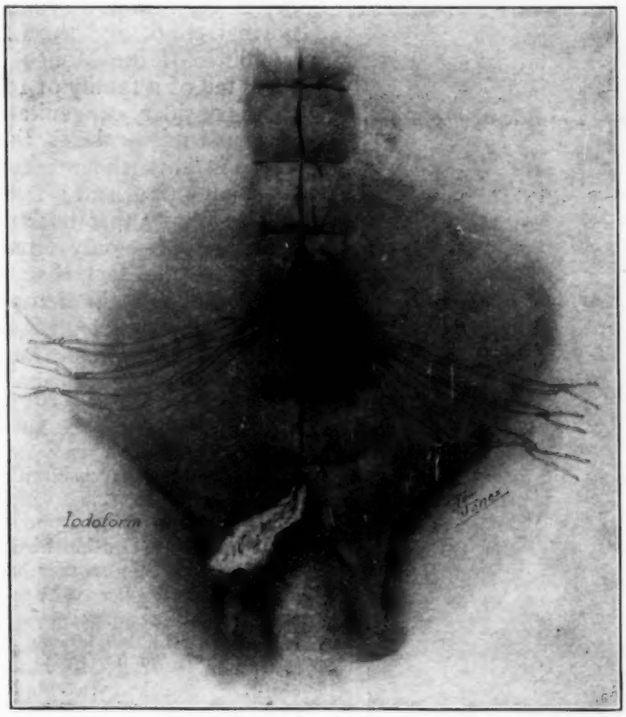

Fig. 3.—Wound with drainage, the threads attached to the radium needles having been carried out through the drainage opening.

Many of the unsatisfactory results in the past may be charged to the inaccurate placing of radium in the bladder. It is of the utmost importance, therefore, that the radium be not only placed accurately but also kept in place throughout the entire exposure.

It is known that commonly prostatic cancer spreads to and involves the bladder wall; and for this reason, the treatment of certain types of prostatic cancer will be included in this paper. Radical excision of a malignant prostate cannot be carried out with any reasonable degree of safety and success, except in very early cases. Those cases of cancer of the prostate which are not too far advanced and which show no evidence of metastasis are thus treated with radium:

A suprapubic cystotomy is made with a liberal high opening so as to give easy access to the involved bladder neck. A bimanual examination is made to determine the limits of the tumor. By means of a needle carrier, a number of hollow needles, each containing a capsule of radium, are inserted directly into the mass about 1 cm. apart in different directions (Fig. 2). A silk guide attached to each needle extends out of the suprapubic wound, by means of which the needle is withdrawn (Fig. 3). These needles are left in place from twelve to twenty-four hours, depending on how much exposure is desired. It is surprising how little reaction occurs from these long exposures as compared to the extensive burns which we see on the mucous membrane of the bladder and rectum when the radium is placed directly on these membranes. One such exposure usually causes the removal of most of the upper part of the tumor, though it may be repeated in a few weeks if found necessary. As most of the tumors begin in the lower part of the gland, a second introduction of needles is made into this part of the tumor by making a dissection through the perineum, exposing the prostatic mass, and introducing the needles carrying the radium into the mass from below.

We have not described this method of attacking the malignant prostate with the intention of reporting cures, because the time since operation has been too short (about two years); however, our results are sufficiently encouraging to warrant continuation of the method.

32 North State Street.

National Department of Health.—In the creation of a department of health, all of the bureaus or parts of bureaus and divisions and boards could be easily adjusted without the loss of prestige by any of them. Some functions could be consolidated into single bureaus. The plan should be constructive of the agencies we now have, certainly not destructive. The Public Health Service, owing to its size and present organization, would constitute the main foundation on which to construct such a department. Its mobile corps of medical and sanitary personnel is an excellent one to expand so as to include in the commissioned corps all of the scientists and specialists transferred from the other departments in grades according to the nature of the work and experience of each. Furthermore, some provision should be made to commission high class specialists in the various branches of preventive medicine from civil life, in grades commensurate with their ability and experience. The mobile corps, as expanded, should continue under the supervision of the surgeon-general, and should perform all of the medical and sanitary duties for all of the bureaus and divisions of the department. The provisions for one well organized, disciplined mobile corps of highly trained health experts to perform all of the medical and sanitary duties for all of the bureaus and divisions will doubtless be an effective agency in coordinating the work of those bureaus.—B. S. Warren, *Pub. Health Rep.*, Dec. 5, 1919.

TWO CASES OF MONGOLIAN IDIOCY IN THE SAME FAMILY*

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Recent endeavors to throw light on the etiology of Mongolian idiocy have resulted in considerable literature on the subject during the past few years. The rarity of its occurrence in more than one child in a family is an observation of universal note.

Goddard[1] has collected the histories of 322 cases of Mongolian idiocy, and in not one instance was there a history of more than one Mongolian child in the family. McClelland[2] remarks that it is a common observation that in no family was more than one Mongolian idiot encountered. Shuttleworth[3] says that the production

Two Mongolian children of the same family and their next older brother, showing characteristic mongolian facies, spatula hand, and short thumb and little finger.

of more than one Mongol in the same family is a great rarity, he himself having heard of only two cases and having never seen any. He also reports the case of twins, one normal and the other a Mongol, as does Swanberg.[4] Dr. Max Schlapp, in the course of examining mental defectives for the city of New York, has seen over 500 Mongols, and in a personal communication to me states that he has never seen two Mongolian children in a family. Van der Scheer[5] has collected reports of two families, one with two Mongols and the other with three, and states that he has been able to find on record the reports of several families in which more than one child presented the disease.

As this type amounts to about 5 per cent. of all types of imbecility, it assumes the proportion of a considerable problem, and a determination of its exact etiology will be a large factor in its prophylaxis.

The controversy over the relation of syphilis to Mongolian idiocy is not yet definitely settled; but to those whose experience has been large, the occurrence of a positive Wassermann reaction is only a coincidence. The proportion of positive Wassermann reactions obtained from groups of Mongols should be over 80 per cent., instead of under 15 per cent., if the causative factor were syphilis, and so far the brains of Mongols have failed to show the characteristic pathologic changes of the disease. Two families showing the apparently intimate relation between the two conditions are reported in the literature: In one, reported by Van der Bogert,[6] first, a syphilitic child was born, second, a normal child, and third, twins, one of whom was a syphilitic of the Mongol type. Babonnieux and Villette[7] tell of a family of four Mongolian children whom they consider congenital syphilitics because of two maternal miscarriages, the death of six other children when infants, the presence of hutchinsonian teeth in these offspring, and a buccal leukoplakia in the father.

The family that has come under my observation is interesting not only from a statistical point of view, owing to the fact that two of the children present classical textbook pictures of Mongolian idiocy, but also from an etiologic point of view, since it presents two possible etiologic factors.

REPORT OF CASE

Family History.—The father, an Italian by birth, aged 49, formerly a bookkeeper, now a postoffice clerk, came to this country before his children were born. His ancestors were of an intelligent class, including lawyers, physicians and druggists, and there is no history of mental disease. The mother, also of Italian birth, aged 42, was the daughter of an engineer. Her mother had diabetes. She is large, obese, and has always been well except for frequent frontal headaches. Her pregnancies have been borne without any difficulty, and she has eleven living children whose ages are 27, 22, 20, 18, 17, 15, 13, 11, 9, 7 and 4. Between the last two children, she had two induced miscarriages. All of the children above 15 have finished school and have then taken business courses so that they are contributing their bit to the support of this large family. Their mentality is unimpaired, several of them showing considerable promise. The two youngest children were never considered to be like the others; they were backward in their development and did not resemble the rest of the family, but the parents have noticed a decided similarity in appearance between these two.

History.—Robert P., aged 7 years, was born after normal but rather prolonged labor. He has always been well but slow to develop. He was brought to see me because of his failure to talk, his vocabulary being limited to single words. He is able to call his parents and some of his brothers by name, and he seems to understand a great part of what is said to him. He is easily embarrassed, good natured, and somewhat restless in his activity. Physically he is undersized and bears the following characteristics of the Mongol: He has blepharitis, almond-shaped eyes with oblique palpebral fissures, epicanthic folds and an external strabismus in the left eye; the mouth hangs open; the lips are thick and

* Read before the New York Neurological Society, Dec. 2, 1919.

1. Goddard, H. H.: Syphilis as an Etiologic Factor in Mongolian Idiocy, J. A. M. A. **68**: 1057 (April 7) 1917.
2. McClelland, J. E., and Ruh, H. O.: Syphilis as an Etiologic Factor in Mongolian Idiocy, J. A. M. A. **68**: 777 (March 10) 1917.
3. Shuttleworth, G. E.: Mongolian Imbecility, Brit. M. J. **2**: 661 (Sept. 11) 1909.
4. Swanberg, Harold A., and Haynes, H. A.: A Case of Mongolism in One of Twins, Arch. Neurol. & Psychiat. **1**: 717 (June) 1919.
5. Van der Scheer, W. M.: Multiple Cases of Mongolian Idiocy in Family, Nederlandsch. Tijdschrift v. Geneesk. **1**: 328 (Jan. 25) 1919; abstr., J. A. M. A. **72**: 1114 (April 12) 1919.
6. Van der Bogert, Frank: Congenital Syphilis, Simulating Mongolism, in One of Twins, Am. J. Dis. Child. **11**: 55 (Jan.) 1916.
7. Babonnieux and Villette: Arch. de méd. d'enf. **19**: 478 (Sept.) 1916.

the tongue is large and protruding, having deep transverse fissures and prominent papillae; the nostrils point forward from a broad, flat nose. The expression is dull and stupid. The skin is soft, dry, and slightly puffy with plenty of subcutaneous fat; the joints are lax, showing a hypotonus. The fingers are short and thick; the thumb is obliquely cut off and the little finger is only half the usual length. Besides these signs he has small genitals with undescended testicles, and until a few years ago he wet the bed. The teeth are very bad, and there is no sign of second dentition as yet.

Edward P., aged 4 years, was born after normal labor His development was slow. This child wets himself, and is noisy, destructive, and ceaseless in his activity, but is affectionate and good natured. It was most difficult to persuade him to submit to examination and to be photographed. He cannot talk and makes only unintelligible noises. His physical status is the exact counterpart of that of his brother: bullet head, brachycephalic skull, grimacing face with slit eyes, blepharitis, drooling mouth, thick lips, protruding tongue, hypotonus, hand of the typical spatular type, and skin of the same quality as that of his brother. To describe one is to describe the other.

The illustration shows the characteristic facies and the spade hand of the younger, though the difficulty in controlling the children made a better picture impossible. As I could not obtain consent for a Wassermann test, those data are unavailable; but a survey of the family history, with nine healthy children previous to these two, and parents who have no evidence of the disease, seems to be sufficient to exclude syphilis.

COMMENT

In these two Mongolian imbeciles we have the last children of a large family, a potent argument for the theory that they develop from a parent in whom the germ plasm has become defective through exhaustion. A history obtainable in over 50 per cent. of Mongols is that the idiot child was the last one of a large family, when the mother was far advanced in her reproductive life, or else that the child was the product of a marriage union consummated late in life.[3]

Let us consider this hypophrenic type from the endocrine aspect, for it is almost impossible to observe this peculiar appearing creature without remarking the growth and the tissue abnormalities. For some time the few points of similarity between the Mongol and the myxedematous cretin have been emphasized and made the basis for thyroid medication; but how different is the restless activity of the former from the dull sluggishness of the latter. So far, absolutely no results have been obtained with thyroid feeding in mongolism. In this family there is a strong endocrine heredity especially on the maternal side; her mother had diabetes, and she herself is of a pronounced dyspituitary type with nasal eyebrows, spacing of the incisors, obesity, and frequent frontal headaches. The children with their dry, smooth, hairless skin, prognathous jaw, small stature, abnormal bony growth, and undescended testicles show some very definite signs which could be classed as polyglandular. Therapy along these lines has, thus far, failed to bring about any cures, but further work will, we believe, throw light on this probable etiologic factor.

74 West Forty-Eighth Street.

Aerial Dust.—Establishments devoted to the manufacture of abrasive materials may present conditions in regard to aerial dust content that can scarcely be equaled in any other industry. The study of such conditions and the devising of adequate means for so controlling them as to protect the workers in this trade from the menace of tuberculosis would seem to invite serious attention.—*Public Health Reports*, May 30, 1919.

A CASE OF LUMBOSACRAL PARALYSIS (TRAUMATIC)

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The lumbosacral plexus comprises the ventral branches of a portion of the fourth and fifth lumbar nerves and of the three upper sacral nerves. The principal nerves arising from this plexus are the anterior crural (second, third and fourth lumbar nerves), external popliteal (fourth and fifth lumbar and first and second sacral), internal popliteal (fourth and fifth lumbar and first, second and third sacral) and obturator (third and fourth lumbar). A combined involvement of all these nerves occurred in the case here reported.

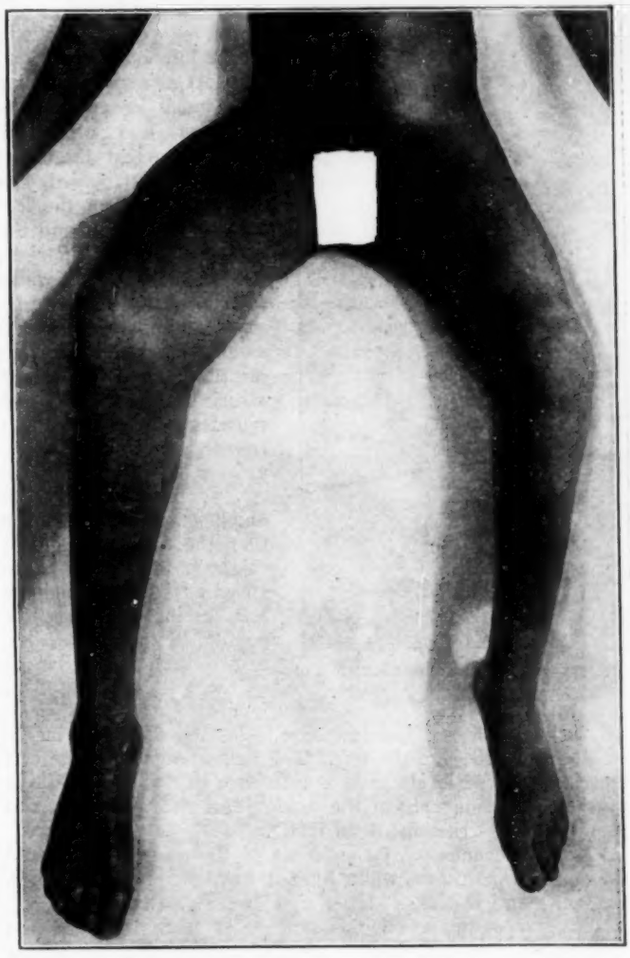


Fig. 1.—Drooping of left foot, and atrophy of entire limb.

REPORT OF CASE

History.—A colored boy, aged 18, a laborer, admitted to the orthopedic service (Dr. Harger), Aug. 19, 1919, complaining of difficulty in walking, stated that about fourteen years before, while in perfect health, he fell on the floor with the legs widely stretched. For nine months he was unable to walk, having been all this time confined to bed. He asserted that up to four years before he had had little difficulty in walking, but

admitted that the left leg was always smaller and weaker than the right. Four years before, this leg became much weaker, and he would fall frequently because of sudden flexion of the knee joint. The whole left leg, he said, had a feeling of being dead and colder than the opposite one, but there never was pain. The patient had had measles, smallpox, mumps, whooping cough, pneumonia (twice), influenza, gonorrhea (one and one-half years before) and multiple sores on the penis (a year before). The family history was good.

Fig. 2.—Atrophy of left leg; tilting of pelvis; bent trunk; scoliosis.

Examination. — The patient looked healthy, and had a marked left scoliosis in the lumbodorsal region; the left side of the pelvis was much lower and the left leg was atrophied, while the right thigh appeared hypertrophied. In standing, he kept the left knee slightly bent and the body bent toward the right (Figs. 1 and 2). In walking, he bent the body forward and to the left, and swung the pelvis, throwing the leg and foot which struck the ground. The muscles of the entire left lower extremity were greatly atrophied, flabby and weak. The leg was much shorter and thinner than the right. The right thigh in the middle measured 25½ inches, and the left, 19 inches; above the patella, 18 and 14¾ inches, respectively. The length of the left limb was 33¾ inches, that of the right, 36 inches. The thighs measured in length 18¾ inches on the right, 18½ on the left. The measurements of the calf muscles at three levels gave a difference of 3 inches in favor of the right side; above the ankle joint the difference was very slight (a fraction of an inch).

Passive movements of the joints of the affected side were exaggerated and somewhat limited in the ankle. Kernig's, Lasègue's and Patrick's "faber sign" were absent.

Active movements on the same side were all abolished except abduction and flexion of the leg. Thus the patient was totally unable to move, on the left side, the toes or the foot, and could not extend or cross the leg, and adduct or flex the thigh over the abdomen. In contrast to such an extensive motor lesion, the sensory disturbances repeatedly studied in various wards of the hospital were rather mild, in the form of patches of anesthesia and hypesthesia over the dorsal surface of the foot and anterolateral surfaces of the leg.

The affected muscles and nerves showed some electrical changes which were rather indefinite. The muscles supplied by the anterior crural and peroneal nerves, as well as these nerves themselves, gave a normal response to the galvanic current, while the posterior tibial and the obturator gave no response whatever. The faradic current was not available.

The roentgen examination detected no changes in the bones or joints (Fig. 3).

The reflexes, like the Achilles tendon and the knee, were lost on the left, the cremasterics were very inconstant; the plantar was absent, and the Babinski negative. Pupillary and genito-urinary changes were absent.

SUMMARY

The clinical findings can be summed up as a flaccid atrophic, partly degenerative paralysis of the left lower limb, with involvement of the main branches of the great sciatic nerve (external and internal popliteal nerves), anterior crural and obturator nerves. The paralysis was of fourteen years' standing, and occurred after a fall in a 4 year old child with the legs abducted. Recovery occurred nine months after the injury, was never complete, and for the last four years the condition had become worse. The extensive paralysis was associated with comparatively mild sensory and indefinite, rather unusual, electrical changes. Bone changes, in spite of a long duration of the paralysis, were totally lacking.

COMMENT AND CONCLUSIONS

The clinical findings in this patient very much resemble those observed by Lorenz,[1] Bernhardt,[2] Schuster,[3] Bade,[4] Peltesohn[5] and others in patients after not altogether successful attempts at reduction of dislocated hip joints. Thus, Lorenz speaks of a "tearing paralysis" (*Zerrungslähmung*) of the sciatic nerve which he has observed twice in 360 cases of so-called

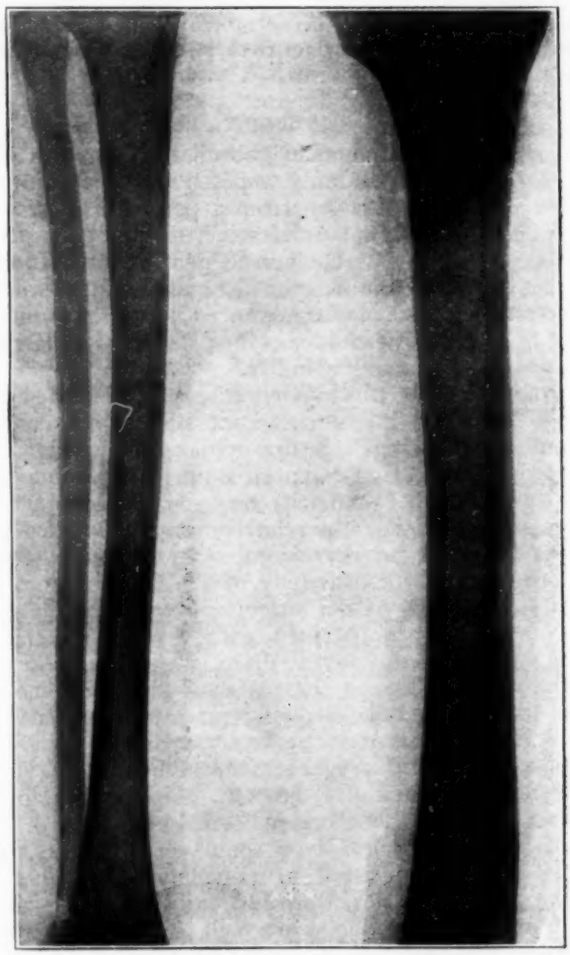


Fig. 3.—Tibia and fibula of affected side, lateral and front views; no changes.

1. Lorenz, Adolph: Ueber die bisherigen Erfahrungen mit der unblutigen Einrenkung der angeborenen Hüftgelenksluxationen, Therap. Monatsh. **13**: 413, 1899.
2. Bernhardt, M.: Ueber einige seltener vorkommende peripherische Lähmungen, Berl. klin. Wchnschr. **28**: 237 (March 7) 1904.
3. Schuster, E.: Neurol. Centralbl. **27**: 654, 1908.
4. Bade, Peter: Ueber Lähmungen im Anschluss an die Reposition der angeborenen Hüftverrenkung, Verhandl. d. Deutsch. Ges. f. Orthop. Chir. **8**: 198, 1909; Beilageheft der Ztschr. f. Orthop. Chir. **24**.
5. Peltesohn, S.: Die Lähmungen im Gefolge der unblutigen Einrenkung der angeborenen Hüftgelenksverrenkung, Ztschr. f. Orthop. Chir. **23**: 222, 1909.

bloodless reposition of the hip joint, while in five of his 360 cases there was a paralysis of the quadriceps from the same cause (tearing of the crural nerve), without sensory changes. Bade explicitly states that the forced abduction procedures are the factors which most frequently lead to paralysis (of the crural and sciatic nerves), which he found to occur in 2.1 per cent. of Lorenz's operations.

Fig. 4.—Long bones of the affected extremity in an old case of poliomyelitis.

Peltesohn comes to the same conclusion from his extensive clinical and experimental studies, though he admits also the possibility of the compression of the sciatic nerve between the trochanter and tuber ischii. In addition to the sciatic paralysis he and many other orthopedists observed also anterior crural paralysis ("from overstretching" the nerve) without any neuralgic pains or sensory changes. The combined lesion of the sciatic and crural nerves he explains, together with the rest of observers, as a "plexus lesion."

It is unquestionable that in our case, in view of the history of a trauma, long duration of the paralysis (nine months), and the presence of sensory disturbances, mild as they are, the lesion should be placed in the plexus, not in the spinal cord. In other words, it should be considered a peripheral and not a central lesion, as in poliomyelitis. Even if we disregard the sensory symptoms, neither the etiology nor the condition of the bone changes speak for the latter. In poliomyelitis of long duration the bones of the affected limb are thin and smooth, and are deprived of their anatomic characteristics. The bone changes confined to the diaphysis only and sparing the epiphysis, are very well shown in Figure 4, which represents the bone changes in a demented 39 year old patient who was paralyzed in both lower limbs for thirty-seven years. This also followed a fall. Not only the bone changes but also the entire clinical picture in this case[6] were totally different from the case reported in this article.

31 North State Street—Cook County Hospital.

6. Hassin, G. B.; Lukas, Christine, and Brown, R. O.: Roentgenographic Bone Changes in a Case of Poliomyelitis, J. A. M. A. **65:** 1459 (Oct. 23) 1915.

Clinical Notes, Suggestions, and New Instruments

VERRUCAE

REPORT OF A CASE

WILLIAM ALLEN PUSEY, M.D., CHICAGO

This case in an Italian boy is interesting, both on account of the excessive number of warts, and the result of the application to them of Vleminckx's solution.

The young man appeared at my office for treatment, September 3, at which time a photograph (Fig. 1) was made. He had a crop of warts that were literally confluent over nearly all of the forehead and temples, and were scattered in large numbers over the rest of the face. The photograph, unfortunately, because of the bad lighting, does not give an adequate idea of the abundance of the lesions. They were as abundant, and as prominent, over the entire forehead as they appear on the right side in the photograph. They made, in fact, a continuous patch three fingers wide below the hairline over the whole forehead. The patient had also a large crop on the backs of his hands.

He was given a solution of 1 part of Vleminckx's solution and 3 parts water, which he applied once daily to the face and hands. In a week he returned. There was a slight scaling dermatitis from the Vleminckx's solution, and a remarkable decrease in the warts. He continued the application, and returned again nine days later. At that time the warts on his face had almost entirely disappeared. His condition at this time is shown in Figure 2, taken sixteen days after the first photograph.

Fig. 1.—Appearance of warts on the day the patient presented himself for treatment.

The warts on the hands, which individually were larger, had not completely vanished, but many of them were gone, and all of them were flattened down and manifestly involuting rapidly.

My attention was first called to the use of Vleminckx's solution in connection with verrucae by the late Dr. James Nevin Hyde. I have used it in a desultory way for many years without being impressed with its value. Lately I have

been using it in stronger solutions and with interestingly good results. I have never seen another case in which removal of the lesions was so surprising as in the one described above, but the solution has served me well in many

Fig. 2.—Appearance of the patient sixteen days after he first presented himself for treatment.

of these troublesome cases. The method of application that I have found most effective is to put on a small dressing, just a little larger than the wart, wet with full strength Vleminckx's solution, and held in place by adhesive plaster. This is left on over night, and repeated until irritation is produced; then it is used less frequently until the wart disappears, or until, in case of plantar warts, the desiccated horny mass can be dug out.

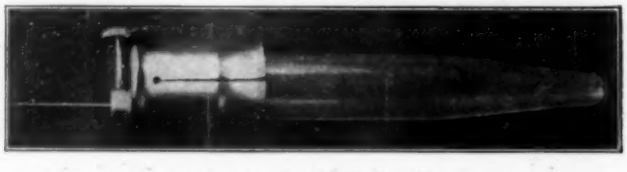
7 West Madison Street.

A NEW METHOD FOR PROCURING BLOOD FOR WASSERMANN TESTS*

R. G. OWEN, M.D., AND F. A. MARTIN, M. D., DETROIT

For the past three years we have drawn bloods for Wassermann tests with a special instrument which we have found convenient and economical.

As shown in the accompanying illustration, it is a small metal cap which fits the centrifuge tube into which the blood



Instrument for drawing blood for Wassermann test.

is drawn. The sides of the cap are flexible so that it will fit tubes of varying sizes within a moderate range.

A needle without a hub is sterilized by dry heat in a small test tube with the point of the needle down. When ready for use the needle may be removed without touching the point. It is held by the middle, the wire withdrawn and the butt end of the needle is inserted into a hole in the top of the cap and tightened with a set screw. The cap is placed on the sterile centrifuge tube, and the instrument is ready for use.

With this instrument, the tube and cap furnish a good handle, and the needle is held rigidly so that it may be guided accurately. The hole in the cap is made large enough to hold any size needle up to and including an 18 gage.

In our work we use thick-walled centrifuge tubes, without a lip, whose outside diameter is approximately 16 mm. The needles used are either 18 or 20 gage. They may be purchased in gross lots for slightly less than five cents each.

After use, the needle is dropped in a strong soap solution from which it may be cleaned with alcohol and ether, resterilized, and used many times.

When the needles and tubes are sterilized in large lots, numerous bloods may be drawn within a very short time and at a slight cost, particularly if the needles are cleaned and used again.

These instruments may be obtained from the Central Scientific Company of Chicago.

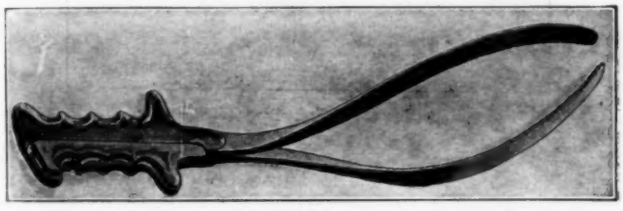
33 East High Street.

* From the Detroit Clinical Laboratory.

FORCEPS FOR USE IN PLACENTA PRAEVIA

W. B. HANBIDGE, M.D., OGDENSBURG, N. Y.

The patient on whom these forceps were first used was at term but not in labor. She had a rather profuse hemorrhage while in bed at 3 a. m., Aug. 11, 1919, and was sent to the hospital with a diagnosis of lateral placenta praevia. Examination revealed a very rigid cervix which admitted the index



Forceps for use in placenta praevia.

finger. The placenta was felt to the left about one-half inch from the os. An anesthetic was given and the cervix dilated to the extent of slightly over an inch. There was some hemorrhage during dilation. A pair of forceps had been prepared by cutting off the posterior part of the fenestra of each blade of a pair of obstetric forceps close to the shank, and at the point where the anterior portion curves backward. In using these forceps, the left blade was turned with the concave surface to the pubes. The handle was held well to the right of the operator and the point pushed up within the uterus, the handle at the same time being carried well to the left and back to the perineum. At the same time the assistant pressed on the fundus of the uterus to hasten the discharge of liquor amnii, and to keep the head well down. The right blade was introduced by reversing the movements. The forceps locked easily and gripped the head firmly. Gentle traction was applied, and all oozing of blood ceased. The anesthetic was removed, and gentle traction was kept up by tying a roller bandage tightly around the handles and extending it over a rod, at the foot of the bed, which could be elevated or lowered by being attached to the irrigating stand. A 2½ pound weight which was tied to the end of the pendant strip of bandage was all the traction that seemed necessary. Occasionally the weight was removed for a short time so that there would not be a continuous pressure of the forceps on the scalp. Pains came on promptly, and at the end of five and a half hours the cervix was about three-fourths dilated. As the presentation was a left occipitoposterior one and the head was not descending, the placenta praevia forceps were removed and obstetric forceps applied. The head was brought down and the occiput rotated to the front.

The infant was normal and uninjured except for a slight cut behind one ear. This may have been done by the obstetric

forceps, but it was probably caused by the placenta praevia forceps on account of no axis traction attachment being used, the blade being too sharp in front and the position being left occipitoposterior.

In this case the placenta praevia forceps were very easily applied, and the pains came on at once and at short intervals. The forceps seemed to act as a gentle dilator of the cervix to stimulate uterine contractions, and a slight amount of traction kept up sufficient pressure of the head on the placenta to prevent hemorrhage.

In modifying a pair of obstetric forceps, it would be preferable to have one with a lock that allows the shanks to come closely together, as it can be applied through a smaller opening than one made with the English lock.

116 Ford Street.

A NEW FRAME FOR TUBERCULOSIS OF THE SPINE

GORDON N. MORRILL, M.D., CLEVELAND

The rather general acceptance of the Whitman-Bradford frame as the best appliance for hyperextension of tuberculous spines leads me to describe a frame which in my experience has proved superior to it in every way for treatment of this disease in children.

The principal reasons for dissatisfaction with the Whitman modification of Bradford's appliance are obvious to those who have had experience with it, namely: (1) the impossibility of holding the kyphos up, owing to the inevitable sagging of the canvas; (2) difficulty in ascertaining the position of the kyphos after the child is strapped into place, because of the thick padding underneath; (3) the necessarily tight apron holding the patient in position, with the result that not only is breathing made difficult, but the body is flattened and compressed to such a degree that normal development is impossible; (4) bad ventilation caused by direct bodily contact with the canvas cover and rubber sheeting; (5) the fact that the entire frame must be bent to the corrective angle, and (6) the great danger of genu recurvatum, owing to the rigid fixation of the knees in a hyperextended position.

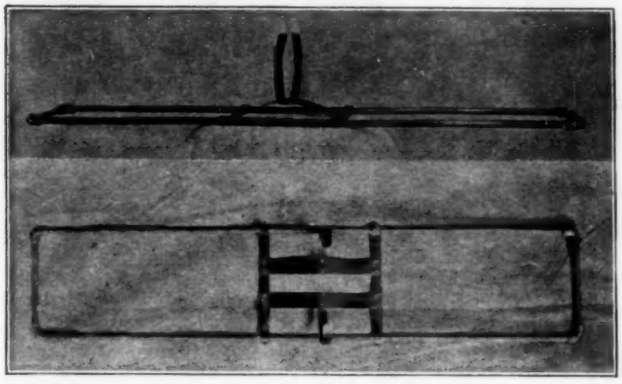


Fig. 1.—Above, Bradford foundation with the new support attached; below, top view of frame.

Each of these defects is completely eliminated in a frame devised by Dr. H. O. Feiss and myself. For eight years I have used it exclusively in all acute cases of dorsal and lumbar tuberculous spines in my work at Lakeside and Rainbow hospitals, with unvarying success and the increasing conviction that it is the most practical device I have yet seen for the purpose.

Because of these excellent results, I feel justified in going considerably into detail in describing the frame and the part it plays in the treatment of Pott's disease in children.

The appliance is constructed on the Bradford frame foundation, which need be made in but two sizes for children under 12. Fastened to the sides of the gas-pipe frame is the support-unit of the device, and this may be moved to any desired position by adjusting four screws holding the cross bars in place (Fig. 1). The support proper is composed of two curved pieces of steel fastened to the cross bars 1½ or 2 inches apart, leaving sufficient space for the spinous processes. To each side of this support proper is attached one-half the waist band, which serves, not as a means of confining the patient, but of fixation for the perineal and shoulder straps. These are attached as shown in

Fig. 2.—Child in position on the frame, showing the arrangement of accessories.

Figure 2, and buckled firmly in place. The knee strap, it should be noted, is placed well above the patellae, thus eliminating the danger of pressure at a sensitive point. An important item, also, is the pad under the knees (Figs. 2, 4, etc.), to prevent stretching the posterior structures of the knee joints. Strips of felt are used as padding on the spinal support and waist-band; and canvas covers, as well as overslips of finer material, are laced on the ends of the frame. A space is left between the lower of these and the support-unit for the use of the bed-pan, for which the entire frame should be raised on blocks. The child wears shirt and drawers when put on the frame, and the outer garment may be buttoned beneath the support, making it unnecessary that the clothing be so large as to include the entire apparatus.

The many advantages of the frame I have described are easily recognized. Naturally, the convex curve of the two pieces of steel, which may be quickly adjusted for any degree of kyphosis, is the main corrective agent of the device. It tends to restore the normal curve of the spinal column, through exaggerating it to compensate for the deformity. By hyperextension of the spine, and by the rigid convexity of the support, the body weight, pulling in opposite directions, separates the diseased vertebrae—which in itself has a naturally curative effect—and at the same time reduces the kyphos. There is no weight or pressure to flatten the chest or abdomen; therefore, normal development and the body metabolism are not interfered with—facts which are made evident by the increase in weight which has always occurred in these cases.

The raising of the trunk above the frame not only makes good ventilation, but also enables the visiting physician

Fig. 3.—Patient having tuberculous spine and hip, with traction on limb.

instantly to ascertain the position of the kyphos in relation to the support.

Moreover, traction may be used without interfering with the patient's position on the frame, as in Figure 3, in which the boy is being treated simultaneously for tuberculosis of the hip and of the spine. In such instances, the frame should be tied at its upper end to the head of the bed, which, together with the perineal straps, makes slipping downward

impossible. In one case, a child having complete pressure paraplegia with paralysis of the bladder and bowels was so treated, with traction on the legs, and in three weeks the paralysis had practically disappeared.

If this frame is to be used on a bed, it is advisable to put a board under each end to prevent the bed's sagging. But it may be laid on a table quite as well (Figs. 2, 4 and 6).

Beyond seeing that the support fits the deformity, there is little to be done for the patient while on the frame, except that he must be rolled off carefully once every day, and his back bathed with alcohol and powdered with zinc oxid. While this is being done, the child should always take a position resting the elbows on the table, the chin in the hands (Fig. 5), thus keeping the spine in hyperextension until the apparatus is again in place. In rolling the patient both off and on the frame, the nurse places her hand on the chest with her arm supporting the abdomen, and turns the frame with the child. To this treatment and proper adjustment of the support is due the fact that there has never been a pressure sore in my experience with the appliance. If the pressure is correctly applied, there will be merely a slightly reddened area on each side of the kyphos. However, it must be clearly understood that this device is never to be used with adult patients, as their skin cannot withstand the pressure of the proportionately greater body weight without resulting abrasions.

With caries of the bodies of the vertebrae it is absolutely essential that the patient be kept on the frame at least six months, as the spasm of the erector spinae seldom ceases under that period. Even if this were not true, a shorter

Fig. 4.—Examples of the two sizes of frame used for children under 12; the pad under the knees is important.

Fig. 5.—Position to be assumed by patient daily while the back is being cared for.

period of recumbency would be unwise, owing to the probability of an exacerbation of the disease. Frequently, as much as a year is required to make certain the best results. Lateral roentgenograms and tracings of the kyphos should be made every two months while the patient is on the frame, increasing the tracings to one a month when the patient has been removed and fitted to a suitable brace. Only in these ways can reliable data on the progress of the disease be secured.

For treatment of tuberculosis of the upper dorsal spines, I use the same frame with a specially adapted support-unit. It differs from the one described only in the curve of the two steel bars, which in this case are bent into a figure S (Fig. 7). With the high point of the curve under the

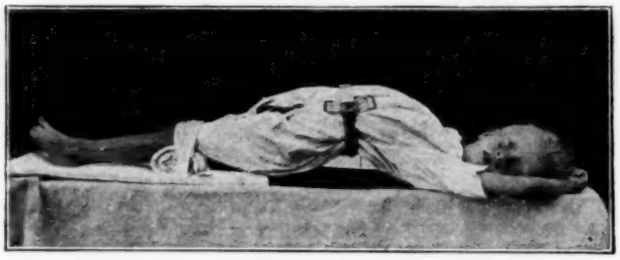


Fig. 6.—Patient in Figure 5 in place on the frame.

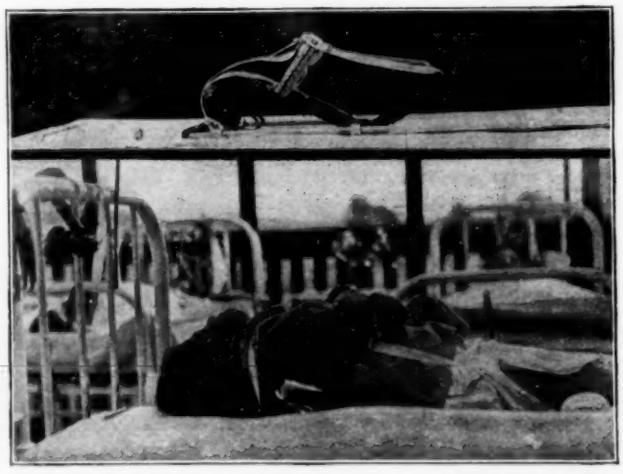


Fig. 7.—Above, special device for tuberculosis of the upper dorsal region (note arrangement of straps and padding); below, patient in position on frame.

kyphos, the weight of the head acts as traction, and usually secures all the extension needed. This is much better than the commonly used plaster bed, owing to the complete ventilation secured, and the ease with which its curve may be adjusted.

In spinal, as in all forms of tuberculous disease, the open air treatment is of vital importance. Therefore, one of the extremely practical features of the device is the ease with which it may be carried about by the nurse in the hospital or the parent at home. The child may even be brought to the physician's office without removal or danger of displacement.

The accompanying photographs cannot fail to make more evident the points I have endeavored to emphasize, particularly the patients' invariable well-being and their normal bodily development while recumbent.

It is with the hope that this appliance may prove of value to others who are interested in the treatment of tuberculous spines that I present it for consideration.

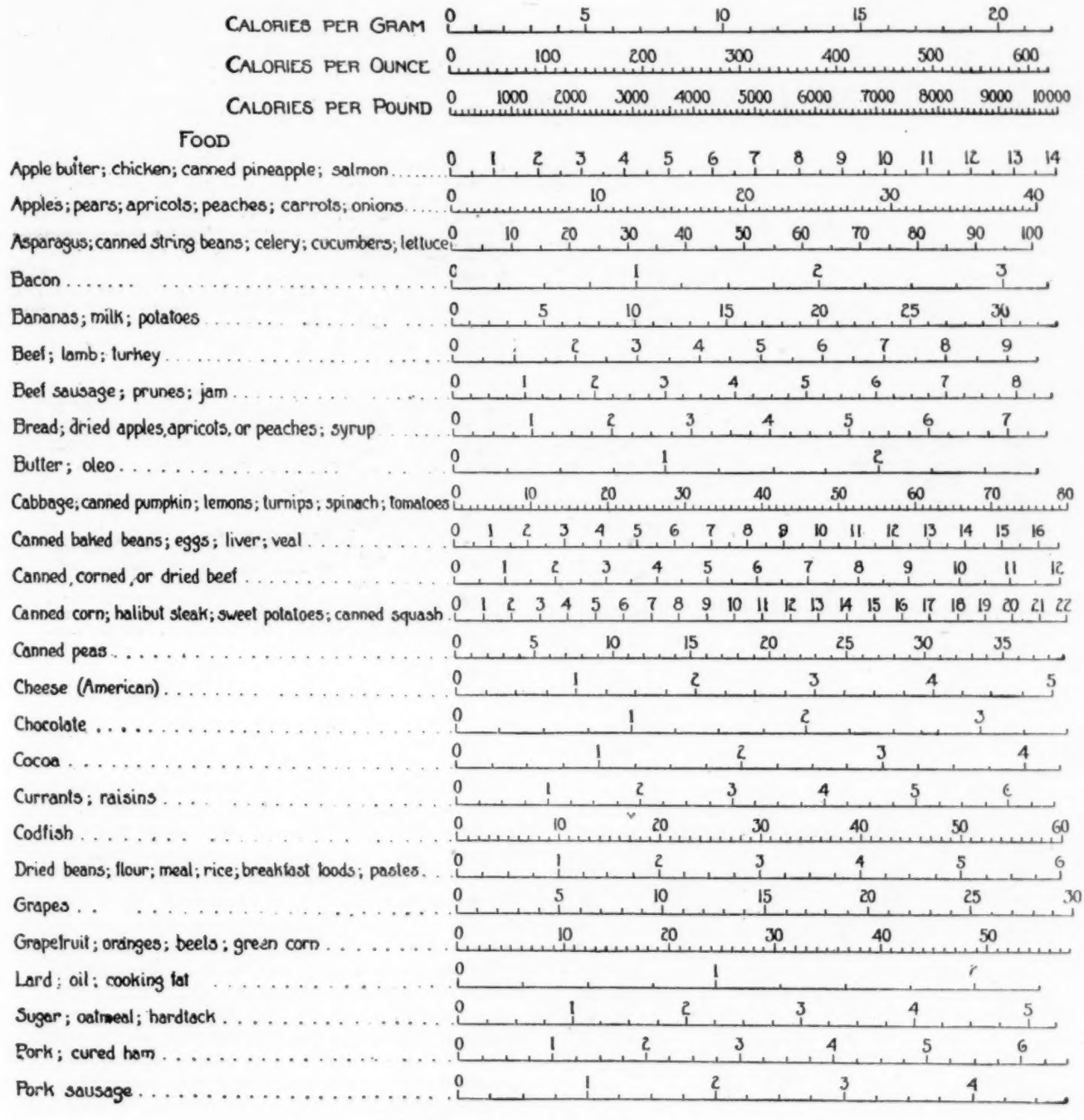
429 Osborn Building.

Treatment of Mental Disorders.—In every large center of population a department for nervous and mental cases should be provided in connection with the best general hospital. This department should be so organized and equipped that the patients would be treated by the most approved methods at the hands of specially trained and experienced nurses and physicians. In no class of case is the necessity for specialists more pressing. In fact special knowledge and skill are the only sure safeguard against gross neglect and mismanagement in the treatment of mental cases.—W. L. Russell, *Canadian J. Mental Hygiene* **1**:161 (July) 1919.

A CHART FOR RAPID CALCULATION OF CALORIFIC VALUES OF DIET

J. F. McCLENDON, PH.D., MINNEAPOLIS
Associate Professor of Physiology, University of Minnesota Medical School

The accompanying chart furnishes the calorific value per unit weight and performs simultaneously the process of multiplication and division, thus giving an immediate answer to the question of the calorific value of any diet, bill of fare or store of food. It is one thing for the physician to recommend a more adequate diet for a patient suffering from pellagra, tuberculosis or other disease, but quite another thing for the patient to procure such a diet. With the increase in cost of food, economic rationing becomes more and more desirable. The calculation of the calorific value of food is seldom done as an economic measure, since the cost of such calculation often exceeds the savings that may arise therefrom. The object of the chart is to reduce the labor of calculation to a vanishing quantity. The time required to use the chart decreases with practice, but is so small as to be negligible even the first time the chart is used. The first time I used the chart, five minutes were required to calculate the calorific value of a diet containing seventeen articles of food, and the error was only 5 per cent. The error due to variation of the foodstuff may be 5 per cent. or more, and hence the use of the chart in calculation is open to no more criticism than the use of Atwater and Bryant's data for the composition of food.


CALORIES PER GRAM
0 5 10 15 20
CALORIES PER OUNCE
0 100 200 300 400 500 600
CALORIES PER POUND
0 1000 2000 3000 4000 5000 6000 7000 8000 9000 10000
FOOD
Apple butter; chicken; canned pineapple; salmon
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14
Apples; pears; apricots; peaches; carrots; onions
0 10 20 30 40
Asparagus; canned string beans; celery; cucumbers; lettuce
0 10 20 30 40 50 60 70 80 90 100
Bacon
0 1 2 3
Bananas; milk; potatoes
0 5 10 15 20 25 30
Beef; lamb; turkey
0 2 3 4 5 6 7 8 9
Beef sausage; prunes; jam
0 1 2 3 4 5 6 7 8
Bread; dried apples, apricots, or peaches; syrup
0 1 2 3 4 5 6 7
Butter; oleo
0 1 2
Cabbage; canned pumpkin; lemons; turnips; spinach; tomatoes
0 10 20 30 40 50 60 70 80
Canned baked beans; eggs; liver; veal
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16
Canned, corned, or dried beef
0 1 2 3 4 5 6 7 8 9 10 11 12
Canned corn; halibut steak; sweet potatoes; canned squash
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
Canned peas
0 5 10 15 20 25 30 35
Cheese (American)
0 1 2 3 4 5
Chocolate
0 1 2 3
Cocoa
0 1 2 3 4
Currants; raisins
0 1 2 3 4 5 6
Codfish
0 10 20 30 40 50 60
Dried beans; flour; meal; rice; breakfast foods; pastes
0 1 2 3 4 5 6
Grapes
0 5 10 15 20 25 30
Grapefruit; oranges; beets; green corn
0 10 20 30 40 50
Lard; oil; cooking fat
0 1 2
Sugar; oatmeal; hardtack
0 1 2 3 4 5
Pork; cured ham
0 1 2 3 4 5 6
Pork sausage
0 1 2 3 4

Scale for rapid determination of calories.

Since food is usually purchased by the pound or in containers whose capacity in pounds is known, the use of the pound as the unit of weight is most convenient. Besides the chart, a measuring tape is necessary. A millimeter tape is most convenient if it is remembered that each millimeter

represents 100 calories, or each centimeter, 1,000 calories. The "calories per pound" scale at the top of the chart represents a millimeter tape with the calory units marked on it, and it may be cut out or copied for use, but it is not long enough and should be extended. A fine thread may be used in conjunction with the "calories per pound" scale, as in the ordinary practice of measuring with a string and transferring to a rule.

A list of the foods and their weights in pounds is prepared. Beginning with the first food on the list, the scale opposite its name on the chart is found and the number corresponding to its weight is noted on the scale and the distance from this number to the left hand end of the scale is measured with the tape. The part of the tape used in this measurement is marked off by covering it with the left thumb, the next succeeding portion of the tape is used to measure the second article of food, and at the end of the process, the calorific value of the whole list of foods is read off directly from the tape. For instance, let us suppose that we wish to calculate the total calorific value of 1 pound of bread and 10 pounds of apple butter. Using the millimeter tape measure (which is identical with the "calories per pound" scale at the top of the chart) we measure off one unit of the bread scale and find it to be 13 mm. Then, taking the same measure and commencing at the 13 mm. point we measure 10 units on the apple butter scale. We shall find that this will take us up to about 84 mm. Therefore, the total calorific value of the 1 pound of bread and 10 pounds of apple butter are 8,400 calories. There may be an error in calculation of 20 calories, which is only 0.5 per cent. Of course, in rapid work, ten times as great an error may occur.

Some further examples are as follows: Suppose a meal is made of 1 pound of beef and 1 pound of potatoes. We measure the beef as about 10 mm. and the potatoes as about 3 mm., or a total of 13 mm. or 1,300 calories (whereas the correct calculation is 1,307 calories by multiplication and addition). Besides this slight error in calculation there is a much greater error in using an average figure for beef. If we were calculating the beef used in an army mess, the data would be nearly correct; but when the beef is cut up there is considerable variation in the different cuts, as illustrated by the fact that Atwater and Bryant devote ten pages of tables to data on fresh beef. Since the different cuts vary from 125 calories per pound for very lean neck to 2,440 calories per pound for very fat flank, it might seem useless to use the chart for beef at all. In case of the higher calorific values, most of the calories are due to large masses of fat that would not be eaten as such, and the lower calorific values are due to the presence of much bone that makes the cuts fit only for soup. In the ordinary practice of eating steaks and chops, the average figure for beef would not be very far wrong. If we have a different scale for every cut of beef, the chart would be too large for ordinary use.

As another example, suppose we make a pudding of a dozen eggs, 5 pints of milk and half a pound of sugar. A dozen eggs weight approximately 1½ pounds, and 5 pints of milk 5 pounds. We find that eggs have the same calorific value as canned baked beans, and milk the same as bananas, to remember which will aid in finding the scale. We measure off 1.5 units on the egg scale and find it to be 9 mm., and 5 units on the milk scale and find it to be 15 mm., or a total of 24 mm., and half a unit on the sugar scale and find it to be 9 mm., making a grand total of 33 mm., or 3,300 calories. The correct calculation gives 3,317 calories; hence our error is about 0.5 per cent.

If the food has been weighed in ounces, the same chart is used, but a new measuring tape must be prepared by cutting out or copying the "calories per ounce" scale at the top of the chart. For instance, to find the calorific value of 1 ounce of butter we measure one unit on the butter scale with our new tape and find it to be 217 calories, whereas the correct calculation gives us 217.38 calories.

If the weight of the food is recorded in grams, the same chart is used, but a third form of measuring tape is prepared by cutting out or copying the "calories per gram" scale at the top of the chart. For example, to find the calorific value of 1 gm. of butter, we measure one unit on the butter scale with this third form of tape, and we find it to be 7.7 calories, whereas the correct calculation would give us 7.668 calories.

In case the food is not sold by weight, the capacity of containers may be estimated. The volumetric capacity of containers may vary if not fixed by law, and the gravimetric capacity may vary with variation in the character of its contents. The tabulated data, obtained in San Francisco, may be of some use. The weights are net.

ESTIMATED CAPACITY OF CONTAINERS

Apples	40 lbs. per box (135 apples in a 4-tier box).
Bananas	70 lbs. per bunch.
Beets	10 lbs. per dozen.
Cantaloupe	65 lbs. per crate.
Cassaba melon	40 lbs. per crate.
Carrots	80 lbs. per sack.
Cauliflower	40 lbs. per dozen.
Celery	3 lbs. per bunch
Cucumbers	40 lbs. per lug-box.
Corn (green)	70 lbs. per sack.
Eggs	54 lbs. per case, 1½ lbs. per dozen.
Grapes	45 lbs. per lug-box, 40 lbs. per crate.
Grapefruit	65 lbs. per crate (64 grapefruits).
Lemons	70 lbs. per crate (350 lemons).
Lettuce	40 lbs. per crate, 13 lbs. per dozen.
Milk	2 lbs. per quart.
Oranges	70 lbs. per crate.
Peaches	55 lbs. per lug-box, 40 lbs. per pony-crate.
Potatoes (sweet)	118 lbs. per box.
Radishes	7 lbs. per dozen bunches.
Spinach	10 lbs. per dozen bunches.
Tomatoes	55 lbs. per lug-box.
Turnips	80 lbs. per sack.

The weight of contents of canned and dry package goods is marked on the container. The foods sold by volume and not weight are usually of low calorific value, and hence the absolute error in estimating the weight is very small.

Therapeutics

A DEPARTMENT DEVOTED TO THE IMPROVEMENT OF THERAPY. A FORUM FOR THE DISCUSSION OF THE USE OF DRUGS AND OTHER REMEDIES IN THE TREATMENT OF DISEASE.

USE AND ABUSE OF CATHARTICS*

(*Continued from page 30*)

THE CATHARTIC SALTS

"Taking a dose of salts" is generally considered an easy and simple way of producing an evacuation of the bowel. Consequently few medicaments are more generally used—and abused—by both physicians and laymen than are the saline cathartics. These salts, in fact, belong among the habit-producing drugs, and are responsible for a large proportion of cases of cathartic habit. That they are occasional accessory causes of death from ileus and appendical and other forms of peritonitis is only too well known to the surgeon.

The chief effect of the salines is to interfere with the absorption of some of the ingested water, so that it is eliminated into the stool instead of passing through the system. They do this, presumably, because they are practically nonabsorbable in the alimentary tract and therefore retain enough water in the colonic contents to render them isotonic with the blood.[1]

As an isotonic solution of sodium sulphate is 2 per cent. of the dried (4 per cent. of the crystalline) salt,

* This is the thirteenth of a series of articles on the pharmacology, physiology and practical application of the common laxatives and cathartics. The first article appeared October 18.

1. Other theories have been advanced to explain the action of these agents. Space for the discussion of these is not taken here, as they do not influence their use.

it would take 500 c.c. (1 pint) of fluid to carry out of the system a dose of 10 gm. (2½ drams) of this salt. In case of magnesium sulphate, 7.5 per cent. of which is isotonic, the proportion of water abstracted is somewhat greater, because this substance is converted in the intestine into magnesium bicarbonate and sodium sulphate, both of which are soluble and practically nonabsorbable. Evidently this is why magnesium sulphate is a more efficient purgative than sodium sulphate. Magnesium citrate, on the other hand, yielding sodium citrate and magnesium bicarbonate, is proportionately less powerful than magnesium sulphate, to the extent that sodium citrate is a feebler cathartic than sodium sulphate.

ILL EFFECT ON THE STOMACH

When the salts are ingested in any other than isotonic strength, they are rendered isotonic in the stomach. In case of strong salt solutions, this is accomplished at the expense of delayed evacuation of the stomach and irritation of the gastric mucosa. We may, therefore, formulate the rule that *salines should be given in dilute solution—generally, a teaspoonful to a tumblerful of water—unless abstraction of fluid from the system is aimed at.* The gastric distention produced is by no means advantageous to the functions of the stomach. This is so well known that purgative salts are preferably taken on an empty stomach; their ingestion is so timed, that they have largely left the stomach before food enters it, which is ordinarily accomplished by giving them at least half an hour before meals. This presupposes, however, a normal emptying time of the stomach. When there is gastric motor insufficiency —a condition in which fluid is evacuated with difficulty and therefore interferes with digestion—these agents are, as a rule, not well tolerated. The condition of sufferers from gastritis is likewise aggravated by any but most moderate doses of isotonic alkalized solution. When there is nausea or vomiting, these agents, with the exception of magnesia, cannot be administered, for they have a tendency to provoke nausea and vomiting in sensitive persons. These are the reasons that most of the cathartics of this class are practically taboo with the gastro-enterologist, who deals with so many of these patients. Even their transduodenal administration by means of Jutte's tube has recently been advocated, to spare the stomach the action of these chemicals.

EFFECTS IN INTESTINE

While these bodies delay the evacuation of the stomach when they are given in concentrated solution or when they produce diarrhea, the moment they enter the intestine they hasten the onward progress of its contents, producing a liquid evacuation within from one to four hours of their ingestion. Such prompt effect is dependent, however, on good peristaltic activity. When this is deficient, as is likely to occur in those confined to bed, instead of one prompt and comfortable bowel movement in one, two or four hours, several small bowel evacuations may ensue with considerable griping in the course of twenty-four hours. For this reason the salines may be advantageously combined with peristaltic stimulants, as salts and senna, sulphur and cream of tartar. From what has been said it is evident that the best time for giving these salines is in the morning before breakfast: while administering them last thing at night is least likely to produce desirable results.

The rush of fluid through the intestine, induced by saline cathartics, results in a veritable washing out of the bowel, which cannot, however, be complete. Liquid and solid materials are passed along the intestine by different processes. While the rhythmic segmentation movements of the intestine may cause a rapid passage of fluid, solid contents, which depend for their propulsion on peristalsis, may be left behind. While the artificial diarrhea produced may carry away poisons, it also causes the loss of a certain amount of nutriment. On the latter action is based their use in the treatment of obesity, which, however, is not nearly as rational as diminution in the intake of nutriment. Not much can be said in favor of their action in so-called intestinal autointoxication: for, while they may remove some of the bacteria and the poisons produced by them, the fluidity of the bowel contents and the greater amount of organic matter contained in them may favor the more rapid growth and development of those organisms left behind.

The evacuant action of the salines is chiefly useful when a single flushing out of the bowel is desired to remove, as thoroughly as possible, irritant or otherwise offensive material. As they produce but little irritation in the intestine, they may be used even in the presence of enteritis and in dysentery. Salines are the classical evacuants to be used in connection with mercurials and anthelmintics, and in case of poisoning.

One of the chief faults of the cathartic salines is their deficiency in stimulating peristalsis: indeed, intravenous or intramuscular injection has been shown to inhibit bowel movement. The rapid evacuation produced is due to distention of the intestine with fluid; and this is so marked that salines are particularly obnoxious for preoperative purgation or for evacuation of the bowel prior to a roentgenologic examination of the abdomen. They are contraindicated in chronic atonic constipation, as they not only do not antagonize the underlying pathologic condition, but actually aggravate it by lessening the need for peristaltic activity, as liquid contents are more easily propelled than solid material. Their use in dyschezia (torpor recti) is irrational, as in these cases they act no better than an equivalent amount of water injected by rectum; and it surely is not good sense to upset water absorptive and other physiologic processes all the way down the alimentary canal in order to distend its lowest segment with fluid that might so much more readily and efficiently be introduced from below.

The chronic use of salines is justified only in those cases of constipation due to minor colonic stenosis, even cancerous, and to partial anatomic obstacles (adhesions, etc.) in patients for whom surgical relief is not desirable.

SYSTEMIC EFFECTS

The source of the fluid eliminated in the stools in the course of saline catharsis is chiefly ingested water. Even if the saline is not taken in isotonic solution, enough water is ordinarily consumed in our diet to produce isotonicity without abstraction of fluid from the blood. It is only when dry diet and concentrated salt solution are used simultaneously that abstraction of fluid from the system occurs. As a result of such concentration, the red blood count may rise to 7,000,000 per cubic millimeter, to return to normal within the next few hours even if no fluid has been taken. A second less marked rise in the concentration of the blood may be observed during the stage of diuresis.

Alongside of this temporary diminution in the volume of circulating fluid there is a tendency to depression of the circulation. This accounts for the feeling of faintness experienced by feeble individuals at the height of action of these agents, as well as for the relief of headaches due to cerebral hyperemia or high blood pressure testified to by others.

In treatment of dropsy, the cathartic salines are perhaps the least harmful among the hydragogues, owing to absence of intestinal irritation. However, their unfavorable action on the stomach may render jalap or elaterin preferable in certain cases. When given for this purpose, from 15 to 30 gm. (½ to 1 ounce) of sodium sulphate (preferable to magnesium sulphate for reasons to be given below), dissolved in from 30 to 60 c.c. (1 to 2 ounces) of water, are taken on an empty stomach, best in divided doses every fifteen minutes until all has been taken. It would be poor therapy, however, to force a patient to take this disagreeable potion, obnoxious not only to the palate but also to the stomach, unless moderate drink restriction is practiced at the same time. The policy of this therapy may be questioned when we realize that mere drink restriction could produce the same result, as far as dehydration of the system is concerned, in a more gradual and less disturbing manner. There are a number of other weighty objections to it. Thus, the salines fail to produce their purgative effect as soon as a certain degree of systemic dehydration has occurred. Under such circumstances they are absorbed; and, if they cannot be promptly thrown out by the kidney, must be retained with an adequate amount of water to maintain isotonicity, thus still further adding to the waterlogged condition of the patient. Furthermore, in the dropsy of myocardial insufficiency, the weakening of the patient by the routine administration of heroic doses of salines more than offsets the benefit to be derived from the abstraction of the small amount of fluid lost in this way. In patients with enfeeblement of the circulation, the drastic use of salines, so commonly practiced, cannot be too strongly deprecated. All this accounts for the observation made, at times, that a patient who at first seemed to improve on this treatment becomes more dropsical again on its continuance. All that can be said in favor of it is that a dropsical patient should not be permitted to become constipated; and that the gentle use of salines, enough to produce one or at most two liquid stools a day, might be recommended, alongside of moderate drink restriction. When watery bowel movements do not result, the administration of the saline should be stopped.

A note of warning should furthermore be sounded against the use of magnesium salts when there is a suspicion that they might be absorbed instead of being thrown out with the stools, as might occur not only under conditions just described, but also in case of ileus. If the patient cannot get rid of the dose in the usual way, it may, by its absorption, aggravate the existing intoxication and even contribute to a fatal result by the depression of the respiratory center and the curare-like action on muscles inherent in the magnesium ion. An extraordinarily high specific gravity of the urine (even 1.070 or 1.080) is suggestive of magnesium sulphate poisoning. In such a case, the antagonism between calcium and magnesium, demonstrated by Meltzer, might be of practical importance, as well as the hypodermic use of 0.6 instead of 0.9 per cent. salt solution to lessen the prevailing excess in osmotic tension. Sodium sulphate is much safer under these circumstances, as it would be less poisonous if absorbed.

One may well be skeptical that anything can be accomplished by saline catharsis in the way of diminishing the bulk of exudates, such as those of pleurisy with effusion. The most that can be said for the practice is that salines, in moderate doses and given in fairly concentrated solution, may be preferred to other cathartics to antagonize constipation. Exhausting purging is a display of poor judgment in these cases, as it can only do harm.

To reduce milk secretion in weaning or to lessen engorgement of the breasts in an otherwise healthy woman, drink restriction may be accompanied by use of saline cathartics for a day or two.

(To be continued)

New and Nonofficial Remedies

THE FOLLOWING ADDITIONAL ARTICLES HAVE BEEN ACCEPTED AS CONFORMING TO THE RULES OF THE COUNCIL ON PHARMACY AND CHEMISTRY OF THE AMERICAN MEDICAL ASSOCIATION FOR ADMISSION TO NEW AND NONOFFICIAL REMEDIES. A COPY OF THE RULES ON WHICH THE COUNCIL BASES ITS ACTION WILL BE SENT ON APPLICATION. W. A. PUCKNER, SECRETARY.

CHINOSOL.—Oxyquinolin Sulphate.—$(C_9H_7ON)_2H_2SO_4$.—A normal oxyquinolin sulphate.

Actions and Uses.—So far as experimental evidence and experience go, chinosol is non-toxic. It is a powerful antiseptic, somewhat stronger in this respect than mercuric chloride and considerably stronger than phenol. It has been found to exert an antiseptic action in solutions containing 1 part to 10,000. It is a feeble germicide, being weaker than phenol and much weaker than mercuric chloride. It is incompatible with alkaline substances (soap) and with salts of mercury and iron. Chinosol does not coagulate albumin or injure the mucous membranes or tissues. The sensitiveness of patients to its solution varies considerably. In some it produces a pronounced stinging when applied to mucous membranes even in dilute solutions (1 to 2,000), but it is claimed not to cause harmful irritation in any strength. It is claimed to possess marked analgesic power and to be an efficient deodorant.

Dosage.—For internal use 0.3 Gm. (5 grains) three times daily. As an antiseptic the average strength of solution used is 1:1,000; as a nasal spray or douche 1:3,000; as a gargle 1:2,000, and as an eye-wash 1:4,000, gradually increased in each case according to the tolerance of the patient up to 1:500. In gargles the strength may be increased to 1:250. As a vaginal douche the initial strength used is 1:1,000, increased to 1:100 if necessary.

Manufactured by Chinosol Co., Parmele Pharmacal Co., New York. U. S. patent No. 906,918 (Dec. 15, 1908; expires 1925). U. S. trademark No. 28,750.

Chinosol Tablets.—Each tablet contains chinosol ¼ Gm.

Chinosol is a yellow crystalline powder of saffron-like odor and burning taste. It melts at from 175 to 177.5 C. It dissolves readily in water, but with difficulty in alcohol and it is insoluble in ether. The aqueous solution has an acid reaction.

A drop of solution of ferric chloride produces in a solution of chinosol a marked green coloration. Barium chloride produces a white precipitate. Solutions of alkaline hydroxides precipitate from an aqueous solution of chinosol a white precipitate, consisting of interlaced crystalline needles, which, after filtration, washing and careful drying in a desiccator, should melt at from 73 to 75 C. On incineration chinosol should not leave a weighable residue.

DUBOIS' IODOLEINE.—Iodized Poppyseed Oil.—An iodine addition product of poppyseed oil.

Actions and Uses.—Dubois' Iodoleine may be used whenever iodides are indicated, its effect being more gradually exerted. See general article, Iodine Compounds for Internal Use, N. N. R., 1919, p. 143.

Dosage.—From 0.25 to 2 Cc. (0.3 Gm. to 2.5 Gm.) per day in capsules taken at meals of Dubois' Iodoleine containing 33

per cent. of combined iodine by weight. From 1 to 10 Cc. (1.14 Gm. to 11.4 Gm. of Dubois' Iodoleine containing 26 per cent. of combined iodine by weight injected intramuscularly when intensive action is desired. Warm to body temperature before injection. For oral administration Dubois' iodoleine is supplied in the form of capsules. For intramuscular administration it is also supplied in ampules.

Manufactured by Laboratoires Dubois, Paris, France (David B. Levy, New York, distributor). No U. S. patent or trademark.

Dubois' Iodoleine Capsules, 0.25 Cc.—Each capsule contains 0.3 Gm. Dubois' iodoleine equivalent to 0.10 Gm. iodine.

Dubois' Iodoleine, Injectable.—100 Cc. contain 30 Gm. iodine.

Dubois' Iodoleine, Injectable, Ampules, 1 Cc.—Each ampule contains 1 Cc. of sterile Dubois' iodoleine equivalent to 0.3 Gm. of iodine.

Dubois' iodoleine is an oil-like liquid, lightly brownish, with an odor of poppyseed oil. It is insoluble in water or alcohol, soluble in chloroform and in ether.

Specific gravity of Dubois' iodoleine 30 Gm. per 100 Cc. at 15 C. is 1.14. Specific gravity of Dubois' iodoleine 40 Gm. per 100 Cc. at 15 C. is 1.22.

When heated it chars and gives off purple vapors of iodine.

When heated with alcoholic potassium hydroxide, Dubois' iodoleine is saponified and the iodine changed to potassium iodide.

About 1.5 Gm., accurately weighed, is saponified by boiling with 100 Cc. half-normal alcoholic potassium hydroxide for three hours under a reflux condenser. The condenser is then removed and the alcohol evaporated. The residue is then acidulated with diluted nitric acid, a small amount of sodium sulphite is added to prevent oxidation of iodine. The fatty acids are then removed by filtration or extraction with chloroform and the iodide determined by titration with potassium sulphocyanate, using ferric ammonium sulphate as indicator.

By this method the iodine in Dubois' iodoleine capsules is not less than 40 Gm. in 100 Cc., and in Dubois' iodoleine injectable not less than 30 Gm. in 100 Cc.

THYROXIN. — 4,5,6-trihydro-4,5,6-triiodo-*alpha*-oxy-*beta*-indole proprionic acid ($C_8H_3ONI_3$).C_2H_4.COOH; an active principle obtained from the thyroid gland. It contains 65.1 per cent. iodine.

Actions and Uses.—Thyroxin is used essentially for the same purposes as Dried Thyroids, U. S. P. It is indicated in cases of diminishing or absent thyroid functioning such as simple goitre, cretinism and myxedema. The reports of Kendall show that thyroxin affects the pulse rate, blood pressure, nitrogen metabolism, relieves symptoms of myxedema and will produce hyperthyroidism. According to Kendall's view the emphasis for the activity of the thyroxin molecule should be placed on the oxy-indol nucleus rather than on the presence of iodine. The most important quantitative measure is the determination of the basal metabolic rate. One milligram (0.04 Gm.) of thyroxin increases the basal metabolic rate in adults approximately 2 per cent. The relation holds for larger amounts, that is, 10 milligrams increases the metabolic rate 20 per cent. It is through the basal metabolic rate that the pharmacological action of thyroxin can be followed best. When given by mouth or intravenously, there is no immedate effect except occasionally when an increase in pulse rate and respiration occurs, which, however, will soon disappear. After twenty-four to thirty-six hours there is a noticeable increase in pulse rate. There may be loss of weight and beginning of nervous manifestations. If the dosage is continued for five or six days, the typical so-called hyperthyroid symptoms will be produced: loss of weight, increased pulse rate with tachycardia, nervous manifestations and a sense of fatigue. With small doses the harmful effects are not produced and a stimulating effect is manifest in cases of myxedema. With large doses, the above symptoms are aggravated: the amount of thyroxin required to produce toxic effects is exceedingly small. It has been reported that the maximum effect from a single injection is not reached until the tenth day, the duration of the effects of a single administration of thyroxin being about three weeks.

In some forms of goiter (such as simple adolescent colloid goiter) the function of the thyroid is defective and the administration of thyroxin is indicated; but in most cases of goiter (especially exophthalmic) thyroxin should never be administered.

Dosage.—0.2 mg. to 2 mg. Thyroxin should always be given in minimum doses and in each case the optimum amount should be determined by trial. In general a *normal* adult will show evidences of hyperthyroidism if given as much as 2 mg. per day. A person afflicted with cretinism requires generally 0.4 to 0.8 mg. per day; a very small cretin requires 0.2 to 1.0 mg. every day or every other day.

In many cases after symptoms of hypothyroidism have disappeared, remarkably small doses suffice to keep the patient in an almost normal state.

The patient should be careful of exertion and should take sufficient protein in the diet to compensate for increased loss of nitrogen from the action of the drug. Thyroxin is offered in the form of tablets which should be used *only* for oral administration.

Manufactured by E. R. Squibb and Sons, New York, by license of the University of Minnesota. Patents applied for.

Thyroxin Tablets 0.2 mg.—Each tablet contains thyroxin 0.2 mg. (1/324 grain).

Thyroxin Tablets 0.4 mg.—Each tablet contains thyroxin 0.4 mg. (1/162 grain).

Thyroxin Tablets 0.8 mg.—Each tablet contains thyroxin 0.8 mg. (1/81 grain).

Thyroxin Tablets 2 mg. (0.002 Gm.).—Each tablet contains thyroxin 2 mg. (1/33 grain).

Thyroxin was introduced into medicine by Kendall (Kendall, E. C., J. A. M. A., Sept. 14, 1918, p. 872; J. Biol. Chem., December, 1919, p. 265). It is prepared from the thyroid glands of animals by severe alkaline hydrolysis and by precipitation from this alkaline solution of the acid insoluble constituents. Thyroxin is separated from this fraction by treatment with barium hydroxide and subsequent crystallization of the sodium salt from an alkaline solution; it is then further purified by treatment with alcohol containing a weak organic acid. It is presumed to exist in three tautomeric forms.

Thyroxin occurs as white crystalline needles in the pure form. It is insoluble in water and the usual organic solvents. It melts at 250 C. It is very susceptible to reduction being easily decomposed by zinc in alkaline solution. It is decomposed by prolonged cooling in water.

Thyroxin forms salts with solutions of sodium and potassium hydroxides. It also forms insoluble salts of barium and silver.

When thyroxin is treated with alcohol in the presence of mineral acid, it dissolves; this does not occur in the presence of weak organic acids.

Dissolve thyroxin in sodium hydroxide solution; on addition of sodium chloride a disodium salt is precipitated. Add the disodium salt thus obtained to alcohol containing ammonium chloride; on boiling, thyroxin separates in long needles.

On analysis it should yield 65 per cent. iodine.

BARBITAL SODIUM (See N. N. R., 1919, p. 83).

Veronal Sodium-Winthrop.—A brand of barbital sodium complying with the N. N. R. standards.

Manufactured by the Winthrop Chemical Company, Inc., New York. U. S. patent No. 782,739 (Feb. 14, 1905; expires 1922). U. S. trademark.

Thromboplastin Hypodermic-Squibb.—A sterilized extract of cattle brain in physiological solution of sodium chloride. It complies with the description of thromboplastin-Squibb, but a longer time is required for the clotting of blood plasma.

Actions and Uses.—See general article Fibrin Ferment and Thromboplastic Substances (New and Nonofficial Remedies, 1919, p. 117). Thromboplastin hypodermic-Squibb is intended for hypodermic and intramuscular injection to increase the coagulability of the blood.

Dosage.—From 10 Cc. to 20 Cc. every 24 to 72 hours. Thromboplastin hypodermic-Squibb is marketed in 20 Cc. vials which bear an expiration date after which time, the contents should not be used. (The manufacturer reports that no loss of potency could be detected in specimens which had been kept unopened for two years.)

Manufactured by E. R. Squibb and Sons, New York. No U. S. patent or trademark.

Brains from cattle freshly killed are removed under aseptic conditions, using sterile gloves and sterile instruments, and are transferred immediately to sterile containers. They are then taken into a sterile room, connective tissue, blood vessels, etc., removed, and the brain substance is thoroughly ground either in a ball mill or sterile meat grinder. The brain substance is then diluted by the addition of physiological solution of sodium chloride containing 0.4 per cent. trikresol in the proportion of eight parts saline solution to one part of brain substance by weight. The reaction of the mixture is then taken, and sufficient sodium hydroxide solution is added to make it neutral to phenolphthalein. It is then filled under precautions insuring sterility into sterile bottles which are stoppered with cotton plugs. The resultant mixture is sterilized by streaming steam for 40 minutes after a preliminary warming. The result is a slightly opalescent, supernatant fluid overlying the coagulated brain substance. It is then tested for sterility, and when required filled into 20 Cc. containers.

Meningitic Form of Acute Poliomyelitis.—When the cervical region of the cord is attacked, one must be on the watch for paralysis of the diaphragm because the virus will not need to spread far to implicate this region. Complete paralysis is easily recognized by the indrawing of the epigastrium with inspiration. When the intercostal muscles are also paralyzed, the condition is pitiable. The child lies cyanosed, with widely dilated nostrils, raising the chest by the accessory muscles. Oxygen gives some little relief, and it is remarkable how long life is prolonged. It is when the paralysis is partial that it may be overlooked, but ineffective cough may rouse suspicion, for in order to cough effectually the diaphagm must be steady.—*Clinical Journal*, December, 1919.

THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

535 NORTH DEARBORN STREET - - - CHICAGO, ILL.

Cable Address - - - - "Medic, Chicago"

Subscription price - - - - - Five dollars per annum in advance

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SATURDAY, JANUARY 10, 1920

IMPROVED METHODS OF TREATMENT OF SHOCK

Whatever may be the cause or causes of surgical shock—which it would be too venturesome to debate at this juncture—considerable evidence is now available pointing to a loss of circulating fluid.[1] In the early studies of shock, when fall of blood pressure appeared to be the most conspicuous symptom, remedial measures were directed toward inducing the blood vessels to acquire a better tonus in order to restore the efficiency of the circulation. It must be admitted frankly that most of these have failed in general to accomplish anything more than very transitory advantage. Stimulants and vasoconstrictor drugs were naturally first to be tested, and, like related methods of physical therapy, they proved to be of little importance. Subsequently, attention was turned more directly to the impaired volume of the blood in shock, even though no external hemorrhage had occurred. Gasser, Erlanger and Meek[2] point out, in one of the most recent discussions of this subject, that the blood volume has been found to be decreased in all forms of experimental shock studied and after all grades of damage. They have shown, in common with other investigators, that the effective volume of the blood may be reduced by transudation of plasma, by absolute stasis in some part of the vascular system, by hemorrhage into tissue, especially into the lumen of the intestine, as well as by dilatation of the capillaries and small veins with greatly increased slowing of the circulation.

Consequently, it has seemed logical of late to treat the condition by an attempt to restore the lost fluid to the circulation. The use of isotonic saline solutions for this purpose has proved to be elusive, as the fluid passes out of the vascular system so rapidly that scarcely any gain can be registered. This fact, long known, has led investigators to seek an artificial fluid that will be more effective in restoring blood volume and maintaining a more normal pressure. The outcome has been the suggestion of various alkaline solutions, and more recently solutions of gelatin[3] or glucose.[4] Mann[5] of the Mayo Clinic, to whom we owe numerous valuable contributions to the subject of shock, has lately come to the conclusion that the best results in the treatment of experimental shock are obtained by the injection of fluid mediums. The data of the experiments justify the conclusion that none of the artificial solutions give such good results as the use of blood. Mann believes that the so-called colloidal solutions and their various modifications give better results than physiologic sodium chlorid solution, but their potency is certainly not equal to blood or blood serum, and occasionally they might be harmful.

During the war, when the subject of shock came into greater prominence than ever before, many surgeons followed the suggestion of Bayliss[6] of London and his followers who have used solutions containing acacia for transfusion. This colloid is not readily diffusible, and it is assumed to increase the osmotic pressure of the blood into which it is introduced. Accordingly, the concentration of the blood by transfer of water from it tends to be prevented. For example, whereas after injection of a crystalloid like salt or sugar into the circulation the diluted blood returns to normal volume within a few minutes, this is not the case when concentrated solutions of gum acacia are employed.[7] When both colloid and crystalloid are introduced in hypertonic solution, it appears that the colloid will hold in the circulation not only the water that it itself slowly attracts, but also the water brought to it rapidly by a hypertonic crystalloid, so that the combined injection of the two results in a rapid and well-sustained expansion of the blood volume. In other words, to quote Erlanger and Gasser, hypertonic gum solutions attract tissue fluids into the circulation very slowly. Hypertonic crystalloids injected intravenously, as is well known, attract water quickly. When the two, the hypertonic gum and the hypertonic crystalloid, are injected to all intents and purposes simultaneously, the gum holds the water that the crystalloid quickly brings into the circulation. Presumably, the blood volume is thus increased by a process that resembles the one which the organism itself employs in combating a reduction in blood volume.

1. Cannon, W. B.: Shock and Its Control, Am. J. Physiol. **45**: 544, 1918. Dale, H. H., and Laidlaw, P. P.: Surgical Shock and Some Allied Conditions, Brit. M. J. **1**: 381, 1917.

2. Gasser, H. S.; Erlanger, J., and Meek, W. J.: Studies in Secondary Traumatic Shock, IV, The Blood Volume Changes and the Effect of Gum Acacia on Their Development, Am. J. Physiol. **50**: 31 (Oct.) 1919.

3. Hogan, J. J.: The Intravenous Use of Colloidal (Gelatin) Solutions in Shock, J. A. M. A. **64**: 721 (Feb. 27) 1915.

4. Erlanger, Joseph, and Woodyatt, R. T.: Intravenous Glucose Injections in Shock, J. A. M. A. **69**: 1410 (Oct. 27) 1917.

5. Mann, F. C.: Experimental Surgical Shock, V, The Treatment of the Condition of Low Blood Pressure Which Follows Exposure of the Abdominal Viscera, Am. J. Physiol. **50**: 86 (Oct.) 1919.

6. Bayliss, W. M.: Methods of Raising a Low Arterial Pressure, Proc. Roy. Soc., London, Series B, **89**: 380, 1915, 1917; Intravenous Injection in Wound Shock, London, Longmans, Green & Co., 1918.

7. Gasser, H. S., and Erlanger, Joseph: Studies in Secondary Traumatic Shock, V, Restoration of the Plasma Volume and of the Alkali Reserve, Am. J. Physiol. **50**: 104 (Oct.) 1919. Erlanger, Joseph, and Gasser, H. S.: Studies in Secondary Traumatic Shock, VI, Statistical Study of the Treatment of Measured Trauma with Solutions of Gum Acacia and Crystalloids, ibid., p. 119.

Since the functional collapse of the vasomotor center or of the heart is now regarded as a relatively late consequence of low arterial pressure rather than its cause, it seems well worth while to pursue further the efforts to restore blood volume and thereby maintain adequate return of blood to the heart and a safe arterial pressure in shock. This immediately helpful feature may be undertaken quite apart from the means to combat the ultimate etiologic factors, such as are represented by the postulated and much discussed tissue poisons, acidosis, etc., which are supposed to deteriorate the normal exchange of fluid through the vessels, or occasion stagnation of blood in certain areas. Erlanger and Gasser[7] of Washington University in St. Louis have convinced themselves, in a series of animal experiments on traumatic shock, that the viscosity of strong gum solutions may be quite harmful, but that when hypertonic gum and hypertonic glucose are given simultaneously and slowly so as to avoid altogether the period during which the high viscosity of the gum is hampering the circulation, a maximum saving of life can be effected. They argue that such beneficial results as they saw are presumably due to the internal transfusion effected by the hypertonic solutions, to the maintenance of the increased blood volume through the colloidal and possibly other properties of the gum acacia, to the action of the hypertonic solution on the heart and blood vessels, and to the specific action of glucose on nutrition in general and on that of the heart muscle in particular. They suggest, further, that blood transfusion is not essential to recovery even from the severest acute hemorrhage, if only the blood bulk can be restored in other ways. The apparent innocuousness of gum-glucose solutions given slowly has already justified a few trials on man[8] which encourage further tests of the method. With the principles and certain limitations of the procedure well recognized through preliminary animal experimentation, the surgeon will be justified, we believe, in giving them further trial in the emergencies of shock that so often fail to yield to current modes of treatment.

HIGH PROTEIN DIETS AND NEPHRITIS

The science of pathology is still far from formulating an entirely satisfactory hypothesis for the genesis of all forms of nephritis. It is known, of course, that incident to the attempts of the kidney to eliminate certain substances like the salts of mercury or uranium or several other metals, a tubular nephritis of varying intensity may arise; and the acute injury may subsequently become chronic in its manifestations. There is considerable justification for the belief that the reaction of the secreted urine, which in turn is dependent on the nature of the food intake, is not without influence on the behavior of the kidney cells under secretory stress. Usually, however, the etiology of nephritic changes is sought in some foreign factor, such as the inorganic possibilities just cited, or nephrotoxins or nephrolysins assumed to arise within the organism itself.

Although the alleged "strain" of eliminating a large quantity of those substances, namely, the products of protein catabolism in the body which the kidney is normally intended to excrete, has been pointed to from time to time as a possible cause of kidney damage, there has been little convincing evidence for such an outcome. Urea, which represents the great bulk of the nitrogenous waste, is evidently excreted with great ease. There are numerous recorded instances of large increments in urea output without any signs of kidney defect or detriment; but experiments to determine the functional efficiency of the kidney have usually been of comparatively short duration. The clinical forms of nephritis are frequently slow in making their appearance. Newburgh[1] has therefore attempted, in the department of internal medicine at the University of Michigan, to ascertain whether nephritis will be produced when the kidneys have been eliminating an unusually large amount of nitrogenous material over a considerable period of time. He argues that just as the kidney secretes ordinary medicinal doses of mercury without harm, but is injured when the quantity offered for elimination in a given time is augmented greatly, as it is in acute poisoning, so the renal cells may react unfavorably if the quantity of some or all of the nitrogenous substances secreted is increased and kept at the higher level for some time. In feeding experiments on rabbits, renal injury was quickly and constantly noted in animals that ate several egg whites daily. Prolonged egg white feeding caused acute and subacute nephritis. When the nitrogenous metabolism was increased by means of casein, rabbits suffered no demonstrable renal injury from eating 15 gm. of casein daily; but when the daily intake of casein was 30 gm., and the nitrogen metabolism was about three times normal, a well marked deleterious effect on the kidney was produced. Rabbits that lived for months on soy beans, which are rich in vegetable proteins, regularly acquired chronic nephritis and frequently died of it. The nitrogen metabolism from this diet was about twice the normal.

We may accept these observations, which are likely to be widely quoted by the advocates of a low protein diet or at least of greater economy in the use of protein, without admitting their wider significance in the etiology of human nephritis. The vegetarians will find little solace in the fact that sources of plant proteins were involved as well as the tabued animal products. Urea per se is not charged with the harm done. It must be remembered that the diets used by Newburgh

8. Erlanger, Joseph, and Gasser, H. S.: Ann. Surg. **69**: 389 (April) 1919.

1. Newburgh, L. H.: The Production of Bright's Disease by Feeding High Protein Diets, Arch. Int. Med. **24**: 359 (Oct.) 1919.

were potentially acid in character, and certain to produce an acid urine in a species adjusted and accustomed to secrete an alkaline fluid under a free choice of food. Until such experiments are successfully duplicated under conditions in which the normal reaction of the renal secretion is not tremendously altered and the accessory factors in the diet are known to be adequate, the incrimination of the high protein diets in connection with nephritis must be considered with judicial reserve.

THE ERADICATION OF TUBERCULOSIS

In the control of a disease like tuberculosis, which permeates all strata of society and which is obviously of an infective nature, there are clearly two factors concerned. It is, of course, essential that the disease should be scientifically studied from all aspects; but it is also necessary that the scientific knowledge that has been gained shall be transmitted in comprehensible form to the masses. There is no disease that has been more systematically and more intelligently combated than tuberculosis, and yet we have no more than scratched the surface. The disease continues to be one of the greatest scourges to which civilized man is subjected. Indeed, it is, as Krause[1] remarks, "a price we pay for our civilization."

In a recent address on the subject, Krause discusses the question of a progressive program for combating this disease. Incidentally, he points out, what had already become apparent, that the fight against tuberculosis will really be a fight against all diseases of an infectious nature; for the same principles underlie the prevention and cure of all parasitic disease. It is interesting to note that the keynote of this address by a scientific student of tuberculosis is not the necessity for further scientific investigation, though this is not denied, but the necessity for the wider application and diffusion of facts already long known, and for a much greater attention to the social aspects of the disease. Of what profit is our scientific knowledge of the etiology of tuberculosis if we fail to apply its obvious lessons? As Krause properly points out, we fail to control the most outstanding and obvious etiologic factors in the spread of tuberculosis. The statute books of our states are replete with antispitting laws, and yet our highways are spattered with expectoration. The regulations of boards of health on the subject of clean milk are voluminous, and yet clean milk is frequently unobtainable by the masses.

These, however, are not the only obvious factors that are neglected. As physicians we have known for generations that tuberculosis is undoubtedly associated with unsatisfactory social conditions. Poverty, insufficient or improper food, alcoholism and insanitary housing all predispose to the activity of tuberculosis infection. It may be said that the adjustment of such conditions does not lie within the realm of the physician. The reforms that are necessary to change them must occur partly as the result of political action, and partly as the result of education. While there are some who hope to change these unfortunate conditions by revolutionary methods, there seems to be little reason to anticipate that much will be accomplished in this way.

1. Krause, F.: Am. Rev. Tuberc. **3**: 513, 1919.

SOME FEATURES OF ASCARIASIS

Ascariasis, or infestation with the eelworm, *Ascaris lumbricoides,* is one of the most common invasions of man by animal parasites. Although it is usually more frequent in childhood, it may occur at any age in the human subject. *Ascaris* is one of the parasites that have generally been asserted to develop in man by the direct method. No intermediate host is required. The swallowed eggs begin their transformation into the lumbricoid worm directly in the alimentary tract. A comparable roundworm is of very frequent occurrence in the intestine of the pig.

Stewart[1] has attempted without success to infect pigs by feeding *Ascaris* eggs to them. Rats and mice, on the other hand, were readily infested by this procedure. In the course of these studies he observed that the larvae find their way into the tissues and particularly into the liver and lungs of the host. The larvae then find their way back to the intestinal tract after migration through the pulmonary tissue, and may ultimately pass out of the alimentary canal without further development. This migration of the larvae of *Ascaris* has also been verified in experiments conducted by Yoshida[2] at the Osaka Medical Academy in Japan. These observations of the larval parasites in rats and mice, taken in connection with the apparent resistance of the pig to direct infestation with eggs, have raised the question as to whether the rodents act as intermediate hosts, the young worms being passed on to human beings (and to pigs) through the contamination of food and water by the saliva or feces of rats and mice that had themselves become infested by swallowing the eggs of the parasite.

More recent investigations by Ransom and Foster[3] at the Bureau of Animal Industry in Washington indicate that it is not necessary to assume an intermediate host in the case of *Ascaris* infestation in man. The real explanation, they remark, of the behavior of *Ascaris* larvae in rats and mice is that the worms are merely going through the same course as they do in their usual hosts, man and pig. The rats and mice are, however, unsuitable hosts; hence the larvae are unable to complete their development to maturity in

1. Stewart, F. H.: On the Development of Ascaris Lumbricoides Lin. and Ascaris Suilla Duj. in the Rat and Mouse, Parasitol. **9**: 213, 1916-1917, and several earlier papers in the British Medical Journal.
2. Yoshida, S.: On the Development of Ascaris Lumbricoides L., J. Parasitology, **5**: 105 (March) 1919.
3. Ransom, B. H., and Foster, W. D.: Recent Discoveries Concerning the Life History of Ascaris Lumbricoides, J. Parasitology, **5**: 93 (March) 1919.

them; whereas in human beings the parasitic larvae, after migration through the lungs and return to the alimentary canal, can continue their growth to an adult stage.

The "wanderings" of eelworms in man have been recognized for a long time, and such cases present a dangerous aspect of ascariasis.[4] That the erratic ascarids may produce lung symptoms in man is more than likely. Ransom and Foster therefore properly remind us, in commenting on Stewart's interesting discovery of the migration of *Ascaris* larvae through the lungs, that this new aspect of the pathology of eelworm infestation is likely to lead to a better understanding of certain obscure diseases of the pulmonary organs. Other dangers from the migrations, whereby perforations of ulcers, liver complications, or other abdominal symptoms have arisen, are recorded in medical literature. Eelworms ought, therefore, to be treated as something more than a "passing curiosity."

Current Comment

MEDICAL VETERANS OF THE WORLD WAR

Our profession responded unselfishly to the call of our country during the world war. The demand for medical men was tremendous, but it was met. Including the 35,000 of the regular services, and the more than 25,000 on the selective service boards, over 60,000 physicians enlisted to support the ideals that the United States has endeavored to maintain. Although our entrance into the conflict was followed by a speedy victory, although our sickness and mortality rates were matters of pride and signalized a great achievement by the medical profession, it is no secret that these happy results were accomplished, in many instances, by great personal sacrifice and by altruistic devotion. In other words, unsatisfactory conditions in many instances were tolerated "for the good of the service"—to win the war—and the physician could only promise himself that should future occasion arise, certain things must be corrected. At the Annual Session of the American Medical Association, immediately following the termination of the war, a group of physicians who had been in the military service, having in mind their experiences, effected the organization known as the Medical Veterans of the World War, and invited into its membership not only those connected with the government services but also those who had served on the selective service boards. Dr. Vaughan,[5] whose letter was published last week, and Surgeon-General Ireland,[6] who discusses the subject in this issue of THE JOURNAL, believe that this organization is entitled to support. It should make possible a united effort by which the greatest good may be accomplished. Many things can be done that otherwise would remain undone. It offers a medium for the presentation of constructive criticism. Finally, through this organization particularly may be preserved, by occasional gatherings, the sympathetic comradeship of men whose ideals today are as high as they were during the war.

BOTULISM FROM CANNED RIPE OLIVES

In recent editorials[1] THE JOURNAL has summarized our knowledge of botulism, especially with relation to extensive investigations made under the auspices of the National Canners Association and in the laboratories of the Leland Stanford University. Because of the violence of the symptoms and the rapidly fatal issue of poisoning with the toxins of *Bacillus botulinus*, the subject has interest beyond the extent of its relative importance in mortality statistics. The recently reported deaths following the eating of ripe olives in Detroit and in Canton, Ohio, were especially significant, because first reports seemed to indicate that the use of the ordinary precautions would not protect the user against such contingencies. There is now available more detailed report of these cases. We are informed[2] of some significant factors that have a practical bearing: First, various members of the party at the banquet in Canton, Ohio, in describing the olives used such expressions as, "Smelled like limberger," "bit the tongue," "soft," "not fit to eat," "stuck to the tongue," etc. Second, it was found that some of the olives had been washed previous to serving and that one person who ate two of these olives recovered. These factors would seem to lend strength to the contention of Weinzirl that the observance of ordinary precautions in eating, such as cleanliness, and the rejection of all food of which there is a suspicion of spoiling, will, in many cases at least, protect the user.

PROHIBITION AND THE DEATH RATE

The large number of deaths recently caused by the drinking of wood alcohol should not lead the public to overlook the important drop in the death rate from certain causes that has followed the legal prohibition of alcoholic beverages. Recent statistics[3] show that for July, August and September, 1919, the number of deaths in Boston from alcoholism amounted to only 7, as compared with 31, 46, 38 and 34 for the corresponding period of the four preceding years. Similarly, accidents diminished from 152 in 1915, 176 in 1916, 197 in 1917 and 151 in 1918 to 112 for the corresponding three months of 1919. Suicides also diminished to a very marked degree. On the other hand, homicides showed no material decrease, a fact that has been noticed in other cities. It seems probable, however, that certain unusual factors are at work to increase the number of murders. As is usual after a great war, familiarity with means of violence and readiness to resort to such means are circumstances that must be reckoned with during the slow return to law and order. The diminution in the deaths from

4. Stiles, C. W., in Osler and McCrae: Modern Medicine **2**: 290, 1914.
5. Vaughan, V. C.: Medical Veterans of the World War, Correspondence, J. A. M. A. **74**: 48 (Jan. 3) 1920.
6. Ireland, M. W.: Medical Veterans of the World War, Correspondence, this issue, p. 122.

1. Botulism: I, II, editorials, J. A. M. A. **73**: 1844, 1887 (Dec. 13, 20) 1919.
2. Jennings, C. G.; Haass, E. W., and Jennings, A. F.: An Outbreak of Botulism, this issue, p. 77. Botulism from Eating Canned Ripe Olives, Miscellany, this issue, p. 127.
3. Month. Bull., Health Dept. City of Boston, September, 1919.

alcoholism, accident and suicide that has occurred in Boston has been observed in many other large American cities, and the saving of life from these causes probably far exceeds the increased number of deaths from wood alcohol poisoning.

THE PRODUCTION OF PRESSURE SYMPTOMS BY NORMAL RIBS

The rôle of cervical ribs in the production of pressure symptoms has been understood for some time, though it is only since the introduction of the roentgen ray as an aid to diagnosis that the frequency of such lesions has been appreciated. Stopford and Telford have recently pointed out that not only cervical ribs but also perfectly normal first ribs may give rise to a similar syndrome. There are peculiarities about the production of symptoms in connection with rib pressure that may with propriety be recalled at this time. It is to be noted that women are more likely to develop such symptoms than men, although they are no more prone to the development of cervical ribs. It is further to be noted that although the rib abnormality is frequently present from birth, the symptoms may not appear until puberty or even later. In some instances trauma plays a definite part in producing the symptoms, particularly injuries that involve the trapezius muscle and interfere with its function as a support to the shoulder girdle. In other cases the symptoms appear spontaneously and without obvious reason, though in these patients also it may be that a lack of tone in the trapezius muscle is responsible. The pressure, no matter whether it is exerted by a cervical rib or by a normal first rib, is almost always on the lower trunk of the brachial plexus. The symptoms are more or less variable, depending on whether the motor, sensory or sympathetic fibers are mainly involved. Patients are likely to complain of neuralgic pain along the ulnar side of the forearm. They may develop partial paralysis of the intrinsic muscles of the hand and of the flexors and extensors of the wrist. Atrophy may occur, and often trophic and vasomotor phenomena are present. Pallor or cyanosis of the fingers, hypothermia, and even trophic ulcers in the distribution of the ulnar nerve have been noted. Objective sensory disturbances in which the protopathic sensibility is more pronouncedly affected than the epicritic sense may result, and in rare cases decidedly elective sensory paralyses are present. Attention is called at this time to those in whom the symptoms are due to a normal first rib, because these cases are not particularly uncommon. Stopford and Telford saw ten such cases in less than two years. In the diagnosis the roentgen ray is of no value, and in the past such cases have doubtless been wrongly diagnosed and wrongly treated because roentgenograms failed to show the cervical rib, and because the clinician did not recognize that a normal first rib could cause pressure and lead to the same syndrome.

Association News

THE NEW ORLEANS SESSION

Headquarters for the Registration Bureau and the Exhibits

The Josephine Hutchinson Memorial Building, the home of the Tulane University School of Medicine, will house the Registration Bureau, the Information Bureau, the Association branch postoffice, and the Scientific and Commercial exhibits. It will also provide meeting places for three of the sections. Thus, the coming annual session will center at Tulane. The Hutchinson Memorial Building is near the business center of the city on Canal Street, between Villere and Robertson. This convenient location, the attractions of the exhibits, and the assured hospitality of the Louisiana profession extended through the Tulane Medical School assure a hearty welcome to those who attend the annual session at New Orleans, April 26 to 30, 1920.

Hotel Headquarters

The following hotels have been designated as the general and the various section headquarters for the New Orleans Session:

PRACTICE OF MEDICINE: St. Charles.
SURGERY, GENERAL AND ABDOMINAL: Grunewald.
OBSTETRICS, GYNECOLOGY AND ABDOMINAL SURGERY: Grunewald.
OPHTHALMOLOGY: Monteleone.

The Josephine Hutchinson Memorial Building, Headquarters for the New Orleans Session.

LARYNGOLOGY, OTOLOGY AND RHINOLOGY: Monteleone.
DISEASES OF CHILDREN: St. Charles.
PHARMACOLOGY AND THERAPEUTICS: Planters.
PATHOLOGY AND PHYSIOLOGY: Planters.
STOMATOLOGY: Lafayette.
NERVOUS AND MENTAL DISEASES: Lafayette.
DERMATOLOGY: De Soto.
PREVENTIVE MEDICINE AND PUBLIC HEALTH: De Soto.
UROLOGY: St. Charles.
ORTHOPEDIC SURGERY: Grunewald.
GASTRO-ENTEROLOGY AND PROCTOLOGY: Lafayette.
GENERAL HEADQUARTERS: Grunewald.

To New Orleans by Boat

Inquiries received from various parts of the country indicate that a number of physicians would like to make the trip to New Orleans by boat. These prompt the suggestion that physicians conveniently near to the Atlantic Sea Board and Gulf ports, as well as those at different points along the Mississippi and Ohio rivers, might arrange boat parties which should provide a pleasant and restful journey. It has been suggested further that if boats were chartered to go to New Orleans from different points and were docked there, these "house boat parties" would provide cool and delightful quarters for those who prefer to stay on the boats during the session.

Medical News

(PHYSICIANS WILL CONFER A FAVOR BY SENDING FOR THIS DEPARTMENT ITEMS OF NEWS OF MORE OR LESS GENERAL INTEREST: SUCH AS RELATE TO SOCIETY ACTIVITIES, NEW HOSPITALS, EDUCATION, PUBLIC HEALTH, ETC.)

ARKANSAS

Hospital Items.—The trustees of Spark's Memorial Hospital, Fort Smith, have purchased a building in which they propose to install a laboratory costing $5,000.——A new sanatorium has been built and equipped at Arkadelphia, by Drs. Charles Wallis and J. Sheppard Moore.

New Officers.—The First Councilor District Medical Society at its meeting in Jonesboro, December 10, elected Dr. Hiram L. Throgmorton, Pocahontas, president; Dr. Charles M. Litterloh, Jonesboro, vice president, and Dr. Thad Cothern, Jonesboro, secretary-treasurer.——Jefferson County Medical Society at its annual meeting, December 2, elected Dr. Mark A. Shelton, Wabbaseka, president; Dr. James F. Crump, Pine Bluff, vice president, and Dr. Joseph F. Gill, Pine Bluff, secretary-treasurer.——Drew County Medical Society at its annual meeting, December 2, elected Dr. Mardelle Y. Pope, president; Dr. Edward R. Cotham, vice president, and Dr. A. S. J. Collins, secretary-treasurer, all of Monticello.

ILLINOIS

Low Death Rate.—The death rate of Chicago for 1919 was 12.76 per thousand, the lowest in the history of the city.

Hospital Item.—Announcement is made that a United States Public Health Hospital is to be established at Great Lakes, the barracks of naval units No. 19 and No. 20 being employed for this purpose, after remodeling.

Fined for Insufficient Heat.—A number of landlords who have failed to provide sufficient heat for their tenants have been fined from $50 to $200 each. On hearing the evidence in one case, the court assessed the maximum penalty and ordered the defendant committed until the fine had been paid. So far as is known, this is the first fine imposed for an offense of this kind in the history of the Chicago Department of Health. The health commissioner caused the arrest of these persons on complaints of the tenants and of physicians who had patients resident in the buildings concerned.

Chicago

Society of Medical History to Hear Drs. Wood and Garrison.—The Society of Medical History of Chicago will meet January 17, at 8 p. m. at the City Club, to hear addresses by Col. Casey A. Wood, on "Walter Bailey, the First Writer of an Ophthalmic Treatise in English," and by Lieut.-Col. Fielding H. Garrison, on "Medical Men and Music," and "Remarks on the Medical History of the War." Those desiring to attend should notify the secretary, Dr. Stanton A. Friedberg.

INDIANA

Personal.—Dr. John A. Scudder, Edwardsport, is ill with septicemia in the Good Samaritan Hospital, Vincennes.

Banquet to Health Department Employees.—Dr. John N. Hurty, secretary of the state board of health, and Dr. William F. King, assistant secretary, gave their annual Christmas dinner to employees of the department, December 24.

Open Air School.—A new open air school has been opened by the Indiana State Sanatorium, with a capacity for about forty children. It is planned to introduce vocational work in the school, both for its therapeutic value and utility in later life. The general course of the state will be followed, interspersed with simple breath and muscular exercises and regulated rest periods.

Will Appeal Smith Case.—The state board of medical registration and examination has employed W. A. Cullop, Vincennes, as its attorney to carry to the supreme court its case against Dr. George F. Smith, Bicknell, whose license to practice medicine was revoked in February last year. A circuit court judge in Knox County decided against the board and ordered the license restored.

Verdicts For and Against Physicians.—In the case of Robert Frederick Volland against Dr. David J. Marshall, Columbus, in which $10,000 damages was claimed on account of severe burns alleged to have been the result of hot water overflowing on the complainant, the jury, December 19, returned a verdict in favor of Dr. Marshall.——In the case of Raymond Uland, Sullivan, against Drs. Edward T. Edwards and Vance A. Funk, both of Vincennes, in which malpractice was alleged, and damages of $15,000 were asked, a jury, December 18, decided in favor of the plaintiff, awarding him $2,000.

IOWA

New Officers.—Dubuque County Medical Society, at its annual meeting, December 9, elected the following officers: Dr. Charles Palen, president; Drs. Alanson M. Pond, Dubuque, and Richard C. Sherman, Farley, vice presidents; Dr. James E. Calhoun, Dubuque, secretary, and Dr. Godfrey C. Fritschel, Dubuque, treasurer.

Warning.—A report has been received that a tall, smooth-shaven man of fine appearance, passing under the name of J. T. McMillan, with graying hair, parted near the center, and brushed toward the sides in a wave, and weighing from 180 to 190 pounds, has been making contracts for the Lee Supply Company of Detroit, which is said to be out of business. This man is wanted by the police and information regarding him should be sent to the chief of police, Fort Madison.

KENTUCKY

Full-Time Health Department Voted Down.—The Harrison County fiscal court, at a special session, December 13, voted down the proposition for a full-time health department for the county by a vote of four to two. The movement was endorsed by the Harrison County Medical Society, Pomona Grange, Harrison County local Red Cross chapter, women's clubs and other organizations.

Health Work.—Dr. Platt W. Covington of the International Health Board has been loaned to Kentucky to assume the directorship of county health work. The state board of health is now in position to give $5,000 annually to the first five counties making like appropriations.——The fiscal court of Daviess County appropriated $5,000, December 11, toward a clinic to be established by the Rockefeller Foundation.

Personal.—The board of control of penal and charitable institutions has reappointed Dr. Frank L. Peddicord, Lakeland, superintendent of Lakeland Hospital for a term of four years, from May, 1919.——Dr. Clifford E. Harkey has succeeded Dr. Elbert W. Jackson as physician of Paducah.——Dr. Harry H. Lewis, Louisville, who has been on trial for murder of his wife, is said to have been declared of unsound mind by the jury.

New Officers.—At the annual meeting of the Clark County Medical Society at Winchester, December 31, Dr. Howard Lyon was elected president; Dr. Edward P. Guerrant, vice president, and Dr. George F. Doyle, secretary and treasurer, all of Winchester.——Daviess County Medical Association, at its annual meeting held in Owensboro, December 16, elected Dr. John C. Hoover, Owensboro, president; Dr. Cicero M. Rice, Sutherland, vice president, and reelected Dr. John J. Rodman, Owensboro, secretary-treasurer.

LOUISIANA

Another Plague Victim.—John Rich, a negro patient in the Charity Hospital, New Orleans, was found to have bubonic plague, and was removed to the Isolation Hospital, December 29.

Maternity Clinic to Be Opened.—A maternity clinic was opened at the Kingsley House, New Orleans, December 23, under the direction of Dr. Phillips J. Carter and Miss Grete Judice, nurse of the child welfare staff. The clinic is one of five which will be operated under the auspices of the Kingsley House and the Child Welfare Association.

Parish Society Election.—At the annual meeting of the Orleans Parish Society, December 13, the following officers were elected: president, Dr. Hector E. Bernadas; vice presidents, Drs. Hamilton P. Jones, Jerome E. Landry and Joseph M. Hountha; secretary, Dr. Edward P. A. Ficklen, and treasurer, Dr. Foster M. Johns, all of New Orleans.

MARYLAND

Appointment to Health Department.—Dr. William T. Howard, Jr., former assistant commissioner of health, has returned to the Baltimore City Health Department as a con-

sultant and expert in statistics. Dr. Howard will continue his duties as teacher in the Johns Hopkins School of Hygiene.

Mortgage Paid Off.—The committee to which was entrusted the securing of funds to pay off the mortgage on the building of the Medical and Chirurgical Faculty of Maryland Library, Baltimore, and of which Dr. W. Edward Magruder, Baltimore, was secretary, completed its work on the day the death of Sir William Osler, who made the first contribution of $1,000 to the fund, was reported in Baltimore.

To Direct School Health Work.—With the idea of making the medical inspections of the schools of Baltimore more effective, Health Commissioner C. Hampson Jones has placed the work under the direct supervision of Dr. H. Warren Buckler, who now heads one of the divisions of the health department. For this work he will have the assistance of the twenty-eight health wardens. The new division will include the sixteen school nurses and the seven physicians who heretofore have reported directly to the commissioner of health. With the health wardens at his call, Dr. Buckler will have a large force of physicians available for examining schoolchildren, thus keeping the schools free from infectious and contagious diseases.

Services in Honor of Dr. Osler.—A notable gathering of members of the medical profession and other friends of the late Sir William Osler attended services in his honor at 3:15 o'clock on January 1, in Old St. Paul's Church, Baltimore. The time was set on receipt by Dr. Henry Barton Jacobs of a cablegram from Lady Osler, stating that the funeral services in England for the famous physician would be held at that hour. The ceremony at St. Paul's was most impressive. The trustees, faculty and student body of the Johns Hopkins University were represented, as well as the nurses of the training school and officials of Johns Hopkins Hospital. The Medical and Chirurgical Faculty of Maryland and the Baltimore City Medical Society were represented by leading members of the medical profession.

Tribute to Dr. Hurd.—The *Bulletin of the Johns Hopkins Hospital* for December contains a record of the work and writings of Dr. Henry Mills Hurd, Baltimore, who was the first superintendent of the hospital. Portraits of Dr. Hurd are shown from the age of 6 to the present time. Dr. Thomas S. Cullen, Baltimore, is the author of the article on Dr. Hurd and has arranged the record of his hospital reports year by year, so that an admirable history of the hospital is presented in small space and biographical data is placed in the record of each year. Dr. Cullen draws special attention to the tremendous amount that Dr. Hurd has accomplished and of how largely he has been responsible for the phenomenal success of the hospital. He also speaks of the splendid tribute to Dr. Hurd in the "Henry M. Hurd Library" of the hospital, plans for which are under way and the funds for which were the gift of the late George K. McGaw.

MASSACHUSETTS

Influenza Research.—Dean David L. Edsall of Harvard Medical school announces a gift of $50,000, the greater portion of which will be used by Dr. Milton J. Rosenau, professor of preventive medicine and hygiene, and his assistants to carry on exhaustive studies and research, to discover some means to prevent future outbreaks of influenza epidemics.

Personal.—Dr. Richard P. Strong, Boston, has been appointed chief medical director of the League of Red Cross Societies of the Nations of the World, with headquarters at Geneva.——Dr. Charles E. Prior, Malden, has been appointed a member of the state board of registration in medicine, succeeding Dr. Charles H. Cook, Natick, deceased.——Dr. Lowell F. Wentworth, Boston, has been appointed assistant commissioner in the department of mental diseases of the state department of health.——Dr. Hamlin P. Bennett, Lynn, was attacked by automobile thieves at a garage recently, and beaten into insensibility.

MICHIGAN

Personal.—Dr. Alvin L. Bailey, Chesaning, was struck by an automobile at Saginaw, recently, and suffered severe injuries.——Dr. Edwin M. Chauncey, Albion, has been appointed assistant in the internal medicine department of the University of Michigan.

Bulletin Michigan Department of Health.—The December issue of this bulletin is devoted entirely to the subject of cancer. It is discussed in such a way that the layman can understand what is said. This bulletin was prepared with the cooperation of the American Society for the Control of Cancer.

Hospital Items.—Work is already under way on the new University Hospital, Ann Arbor.——The Will Curtis residence, Reed City, has been purchased and will be occupied as a hospital in place of the one recently destroyed by fire.——The Lange Hospital, Lansing, has been temporarily leased to the Sisters of Mercy of Jackson and will be operated by them until they can locate a proper site and erect a new building. It will be opened for service to the public, January 15. It is the purpose of the Sisters of Mercy to locate here, and through the operation of the Lange Hospital they hope to determine the needs of the city before building the new hospital.

MINNESOTA

Osler Memorial Meeting.—A meeting of the staff of the Mayo Clinic, Rochester, was called, December 31, in honor of the late Sir William Osler.

Personal.—Dr. Harry A. Britton, acting superintendent of city hospitals, Minneapolis, and Dr. Harry M. Guilford, city health commissioner of Minneapolis, have resigned.

Red River Valley Physicians Meet.—At the annual meeting of the Red River Valley Medical Society held in Crookston, the last week in December, Dr. O. Edward Bratrud, Warren, was elected president; Dr. Ralph L. Kirsch, Crookston, vice president, and Dr. Hallward M. Blegen, Warren, secretary-treasurer.

NEBRASKA

Personal.—Dr. Philip H. Bartholomew, Blue Hill, has succeeded Major Leader as head of the venereal disease work in Nebraska.

Society Election.—The Omaha and Douglas County Medical Society held its annual meeting and banquet, December 22, and elected the following officers: president, Dr. Paul H. Ellis; vice president, Dr. Arthur D. Dunn, and secretary-treasurer, Dr. Roy A. Dodge, all of Omaha.

Alumni Elect Officers.—At the ninth annual alumni meeting of the University of Nebraska, College of Medicine, held in Omaha, November 20, the following officers were elected: president, Dr. Charles R. Kennedy, Omaha; vice presidents, Drs. Jacob E. Meisenbach, Staplehurst, and John C. Davis, Jr., Omaha, and secretary-treasurer, Dr. William N. Anderson, Omaha.

NEW YORK

Erie County Society Elects New Officers.—At the ninety-eighth annual meeting of the Erie County Medical Society, December 16, the following officers were elected: president, Dr. Earl P. Lothrop; vice presidents, Drs. Arthur G. Bennett and DeWitt H. Sherman; secretary, Dr. Franklin C. Gram (reelected for the twenty-seventh consecutive term), and treasurer, Dr. Albert T. Lytle, all of Buffalo.

Hospital Items.—Bethesda Hospital, Hornell, has been raising funds for a new building.——It is reported that the buildings of the U. S. General Hospital No. 8, Otisville, are to be destroyed, as the New York Health Department does not allow the removal of buildings that have been occupied by tuberculosis patients for use in other places, and since the buildings for this hospital were erected on the grounds owned by the New York City Sanitarium, the rule is said to be effective in this case.

State Death Rate Higher.—The latest vital statistics report of the New York State Health Department shows that the general death rate for the state increased slightly in November over that of the preceding month, though it was still 17 per cent. below the average death rate for that month during the past five years. The birth rate for November was 20.4 per thousand population, which is much below the average for the years 1913-1917. The infant mortality rate for November was 66, which is 19 points below the average for that month. The number of deaths from diphtheria increased during the month of November, being 187 as compared with a five years' average of 142 for the same month.

Preschool and Other Clinics Established.—The Visiting Nurses' Association of Watertown, which has been conducting a child welfare clinic, has recently opened a preschool clinic, which is under the direction of Dr. Horace C. Montgomery, Watertown, and Miss Carey.——The board of health of the city of Elmira has authorized the establishment of a general clinic to include child welfare work and measures against tuberculosis and venereal disease.——At New

Rochelle, a committee has been appointed to interest the people of the community in a health center.——At Gloversville, a committee has been named by the board of health for the purpose of securing suitable quarters for a health center.

New York City

Smallpox on Ship.—On the arrival of the steamer *Duca Degli Abruzzi* from Genoa and Naples, January 3, two cases of smallpox were found on board. The patients were removed to Swinburne Island, and the 1,300 steerage passengers will be held on Hoffmann Island three weeks for observation.

Low Death Rate.—Health Commissioner Royal S. Copeland announced, January 3, that the death rate for greater New York was lower than any year since the department has been organized. For 1919, the mortality rate was 12.30 per thousand; 1918, 16.71 per thousand, and for the five preceding five-year periods, 13.94 per thousand.

Mary Putnam Jacobi Fellowship.—The Women's Medical Association of New York City offers this Fellowship of $800, available for postgraduate study. It is open to any woman physician for work in any of the medical sciences. Applications for the year 1920-1921 must be in the hands of the committee on award by April 1, 1920. For information address Dr. Rose Cohen, secretary, 151 West Seventy-Eighth Street, New York City.

Organizations Warn Against Wood Alcohol.—A record of fifty-one deaths and at least one hundred cases of blindness due to wood alcohol during the first twenty days of December, has aroused to action the National Committee for the Prevention of Blindness, the New York Academy of Medicine, the department of health and Chief Medical Examiner Charles Norris. These agencies, after a conference, issued a warning to the public of the danger of drinking anything in the saloons that passed for whisky. Dr. Ward A. Holden has been designated by the committee on public health and hygiene of the New York Academy of Medicine to make an exhaustive study of wood alcohol in relation to blindness.

Personal.—Dr. Charles F. Hunt has been elected surgeon of the Defendam Association.——Theodore C. Lyster, Col., M. C., U. S. Army, who has been with the yellow fever commission in Ecuador, Colombia, and Southern Mexico, since March, 1918, returned to New York on the *Esperanza*, December 21.——Dr. Jacques Loeb of the Rockefeller Institute for Medical Research has been elected an honorary member of the Royal Institution of Great Britain and Ireland. ——Wickliffe Rose, chief director of the International Health Board of the Rockefeller Foundation, and Dr. Richard M. Pearce, Philadelphia, director of the division of medical education of the board, sailed for Europe, December 11, to secure information about public health administration and methods of medical education in England and on the Continent.

OKLAHOMA

Personal.—Dr. George W Goss, Pawhuska, has been appointed superintendent of health for Osage County.

New Officers.—Muskogee County Medical Society, at its annual meeting, elected the following officers: president, Dr. Pleasant P. Nesbitt; vice president, Dr. Joseph H. Sanford, and secretary, Dr. Joseph G. Noble, all of Muskogee. ——Woodward County Medical Society elected the following officers: president, Dr. Ralph A. Workman, Woodward; vice president, Dr. Paul G. Eilers, Quinlan, and secretary, Dr. Charles W. Tedrowe, Woodward.——Kay County Medical Society met at Blackwell, December 11, and elected Dr. James C. Hawkins, Blackwell, president; Dr. Ralph P. Mavity, Braman, vice president, and Dr. Isaac D. Walker, secretary-treasurer.——At the annual meeting of the Tulsa County Medical Society, Dr. Gregory A. Wall was elected president; Dr. Fred S. Clinton, vice president, and Dr. Albert W. Pigford, secretary-treasurer, all of Tulsa.

PENNSYLVANIA

Mellon Lectures.—The fifth Mellon lecture of the Society for Biological Research of the University of Pittsburgh was delivered by Major-Gen. William C. Gorgas, M. C., U. S. Army (retired), January 8, on "Yellow Fever," illustrating the application of modern sanitation and preventive medicine in the control of epidemic diseases.

Physicians Held Under Prohibition Law.—Four physicians of Pittsburgh and one druggist were arrested, December 27, and are held under $1,500 bonds each on a charge of violation of the war-time prohibition law. The physicians were charged with prescribing whisky to a special agent of the department of justice, and the druggist was charged with having sold a quart of whisky "for beverage purposes."

Public Health Activities.—To promote the public health and social welfare of the people of Lehigh County, a public health and welfare society has recently been organized in Allentown, of which Dr. Charles D. Schaeffer is president and Dr. J. Treichler Butz is vice president.——The new county health committee, under the guidance of Dr. Howard C. Frontz, Huntingdon, county medical director, have outlined a health program for the county which will be conducted on the broadest lines and include a tuberculosis committee to be affiliated with the Pennsylvania Society for the Prevention of Tuberculosis.

Personal.—Dr. Walter W. Seibert, Easton, has been appointed a trustee of the State Hospital, Rittersville.——Dr. Chester G. Crist, Gettysburg, has been elected coroner of Adams County.——Dr. Thomas M. Baird, Tunkhannock, recently discharged from service, has been commissioned lieutenant-colonel, M. R. C., U. S. Army.——Dr. Raleigh R. Huggins, Pittsburgh, has been appointed dean of the faculty of the School of Medicine of the University of Pittsburgh, succeeding Dr. Thomas S. Arbuthnot, resigned.——Dr. Henry C. McKinley, Meyersdale, has been elected secretary of the Somerset County Medical Society for the thirty-first consecutive time, having served for thirty years, or since the organization of the society.——Dr. William J. Crookston, Pittsburgh, has been commissioned lieutenant-colonel, Medical Corps, N. G., Pa., and assigned to duty with the first division.——Dr. Dewitt B. Nettleton, Pittsburgh, has been commissioned major, M. C., N. G., Pa., and assigned to duty with the First Field Artillery.——Dr. Constantine P. Faller, Carlisle, has been commissioned major, M. C., N. G., Pa., and assigned to duty with the Eighth Infantry.

The Wood Alcohol Question.—The commissioner of health of Pennsylvania has issued the following advertisement:

"TO MANUFACTURERS, DISTRIBUTORS AND DEALERS"

Owing to the unusual conditions arising in neighboring states from the sale and distribution of mixtures containing wood alcohol which has resulted in a large number of deaths, the Pennsylvania State Department of Health in conjunction with the Pennsylvania Food Commissioner and the Pennsylvania Board of Pharmacy and the Attorney General's Department hereby serves notice upon manufacturers, distributors and dealers that an embargo will be placed upon all non-official preparations containing alcohol unless the manufacturer, dealer or distributor of such preparations satisfy by affidavit the State Department of Health that the preparations do not contain wood alcohol. The affidavits must be filed with the State Department of Health on or before January 8th, 1920.

EDWARD MARTIN, Commissioner of Health.

By the act of July 17, 1919, the putting of wood alcohol in medicines, toilet preparations, etc., is punishable by a fine of $500, and Thomas S. Blair, Harrisburg, chief of the bureau of drug control, has nine inspectors going over the state to examine into the enforcement of the law.

Philadelphia

Testimonial Dinner to Dr. Krusen.—A testimonial dinner to Dr. Wilmer Krusen, former director of public health and charities, was given by the physicians of Philadelphia at the Bellevue-Stratford, December 30. Dr. Hobart A. Hare was the toastmaster.

Pathologic Laboratory Dedicated.—At the dedication of the new pathologic laboratory of the Philadelphia General Hospital, the principal address was delivered by Dr. William H. Welch of Johns Hopkins University, who spoke of the important part played by morbid anatomy in the advancement of medicine. Addresses were also made by Dr. Arthur D. Bevan, Chicago, and Louis B. Wilson, Rochester, Minn.

Assistant Health Director Appointed.—Col. C. Lincoln Furbush, the newly elected director of public health and charities, has appointed as his assistant director, Dr. Norman H. Taylor of Chestnut Hill. Dr. Taylor after his graduation from Harvard Medical School was chief resident physician at the Pennsylvania Hospital before the war; he became first lieutenant in the Medical Corps of the Army and attended vacation courses at the Sorbonne, Paris.

Navy Hospital Abandoned.—After continuous use since the Civil War days, the United States Naval Hospital, at Twenty-Fourth and Gray's Ferry Road, has been ordered abandoned by the United States Navy Department. The

250 patients in the institution at the present time, will gradually be removed to the new naval hospital at the Philadelphia Navy Yard which has accommodations for 1,000 men. Besides the old hospital of Civil War days, three fine modern structures, which were erected in 1918, will be left vacant. It is thought that they may be made into an extension of the United States Naval Home on the grounds of which they are located, but no orders have been received to that effect.

Personal.—Dr. Ellen C. Potter, having been appointed a special lecturer in the health department of the Bryn Mawr College, has opened a course of lectures on social hygiene. —Dr. James R. Martin has been commissioned major, M. C., N. G., Pa., and assigned to duty with the First Infantry.—— Dr. Harry A. Schatz has been commissioned first lieutenant in the Pennsylvania Reserve Militia.——Dr. Lawrence F. Flick has been elected president of the newly organized American Catholic Historical Society.——Dr. Horace B. Anderson has been appointed chief of the genito-urinary clinic at Phipps Institute, by the state commissioner of health.——Dr. Louis Schwartz, who for the past four and one-half years has been in charge of the medical department of the immigration service at this port, has been transferred to Ellis Island. Dr. Dana E. Robinson, who has been connected with the War Risk Insurance branch at Cincinnati, has been appointed to take Dr. Schwartz' place.

TENNESSEE

Personal.—Dr. George C. Thomas has been appointed health officer for the city of Greeneville.——Dr. Walter S. Nash has been appointed chief of the medical staff of the Knoxville General Hospital.

Society Meetings.—At the annual meeting of the Sullivan-Carter-Johnson County Medical Society, December 3, the following officers were elected: president, Dr. Wiley W. Vaught, Shouns; vice presidents, Drs. George E. Campbell, Elizabethton, Thomas F. Staley, Bristol, and James R. Butler, Mountain City, and secretary-treasurer, Dr. William K. Vance, Bristol.——At the annual meeting of the Memphis and Shelby County Medical Society, held at Memphis Country Club, December 18, Dr. J. Lucius McGehee was elected president; Dr. Julian B. Blue, vice president, and Dr. Joel J. Hobson, secretary-treasurer, all of Memphis.——Chattanooga Medical Association, at its annual meeting, December 5, elected Dr. William H. Cheney, president; Dr. Willard H. Steele, vice president, and reelected Dr. Hiller P. Larimore, secretary and treasurer.

CANADA

Released After Long Imprisonment.—Hon. Dr. Henri Severin Beland, St. Joseph de Beaue, Que., member of the Dominion House of Commons, returned to Canada, recently, after several years' imprisonment in a prison camp near Berlin.

Rockefeller's Donation to Medical Education.—Of the $5,000,000 said to have been donated by Mr. John D. Rockefeller to the medical colleges of Canada, President Falconer and Dean Clark of the medical faculty of the University of Toronto say that they have had no official notification up to this time. In Ottawa, great interest has been manifested in the announcement, coming as it does on the renewed discussion of the removal of Queen's Medical College from Kingston to Ottawa. The Manitoba Medical College, the third largest in the dominion, expects to get at least $1,000,000 of the donation, while the Western at London, Ont., will lay its claims before the Rockefeller Foundation so that it may receive its share.

GENERAL

Bequests and Donations.—The following bequests and donations have recently been announced:

Toronto General Hospital, a donation of $250,000, by Sir Joseph Flavelle, chairman of the hospital board of trustees.

Rockefeller Institute for Medical Research, New York City, $1,000,000 by the will of the late Jacob D. Schmidlapp.

American Section of the German Red Cross, a check for 2,500,000 marks donated by relief committees in the United States for the benefit of tuberculous and undernourished German children.

Senate Passes Bill for Treatment of Tuberculous.—On January 5, the senate unanimously passed the bill permitting civilian employees of the United States government who may be stricken with tuberculosis to enter hospitals already established by the Army and Navy and Public Health Service. Civilian employees of the government will, primarily, receive treatment in Public Health Service hospitals but, in emergency, may go to Army and Navy hospitals. The bill now goes to the House of Representatives.

Appropriation for Research Work.—The Trustees of the American Medical Association have made an appropriation of money to further meritorious research in subjects relating to scientific medicine and of practical interest to the medical profession, which otherwise could not be carried on to completion. Applications for grants should be sent to the Committee on Scientific Research, American Medical Association, 535 North Dearborn Street, Chicago, before Feb. 1, 1920, when action will be taken on the applications at hand.

The Index Catalogue of the Surgeon-General's Library.—Volume 1, 3rd series, dated Aug. 1, 1918, covering the titles included under A-Army, has just appeared. The total number of volumes to date in the previous series is thirty-eight. The complete series, including the present volume, lists 349,313 author titles, including 178,000 volumes and 319,497 pamphlets. It also includes 309,499 book titles and 1,186,271 periodical articles—certainly an extensive accumulation of medical literature. The Surgeon-General's library itself includes 230,559 volumes, bound and unbound, and 352,523 pamphlets.

Red Cross Appointments.—The following appointments to the medical department of the League of Red Cross Societies are announced: Prof. George Chandler Whipple of Harvard University, chief of the division of sanitation; Col. Francis L. Langley, assistant chief; Dr. Thomas R. Brown, Johns Hopkins University, Baltimore, chief of the division of medical information and medical publication; Miss Alice Fitzgerald, chief of the division of nursing; Dr. George C. Shattuck of Harvard University Medical School, Boston, chief medical secretary, and Col. Henry A. Shaw, M. C., U. S. Army, in charge of the field work of the league in the prevention of communicable diseases in eastern Europe. Colonel Shaw will have as assistants, Lieut.-Col. George Fordham, M. C., U. S. Army, and Major S. H. Dunn, S. C., U. S. Army.

Red Cross and Order of St. John Unite.—An agreement has been signed by the Red Cross Society and Order of St. John by which the joint working of the joint corporations which led to good results during the world war will continue during peace. Under the agreement, a joint council has been appointed consisting of an equal number of members of each body and to this council is given the general control of the work of the two corporations. The matters which it is expected to bring under the immediate attention of the joint council are the care of the sick and wounded; such care as may still be necessary for prisoners of war; the care of those suffering from tuberculosis; child welfare; work parties to provide the necessary garments, etc., for hospital and health institutions; assistance required in all branches of nursing, health and welfare work, and home service ambulance work.

Physicians Desire Free Transportation.—The Cummins Bill providing for the return of the railroads to their owners, as finally passed by the Senate, does not contain the provision forbidding the use of free transportation to railroad surgeons. Such provision was contained in the Esch Bill as it passed the House, and prohibited free transportation to physicians and lawyers, "unless they devoted the principal part of their time to the railroad service." This provision of the Esch Bill was the occasion for wide-spread protest on the part of roailroad surgeons and of local physicians for railroads who are called on in emergency to render medical aid in connection with the railroad service. The subject now will be determined by the Conference Committee appointed to adjust conflicting portions of the Cummins Bill and the Esch Bill between Senate and House. If the Conference Committee recognizes the hundreds of protests that have come to senators and members of the House, it is likely that this objectionable feature of the Esch Bill will be stricken out by the committee.

Regulation Proposed for Wood Alcohol.—State authorities, when fatalities occur, may prosecute for manslaughter and murder persons charged with selling wood alcohol for beverage purposes. However, additional legislation to safeguard the use of the poison will be recommended to Congress by the commissioner of internal revenue. The character of the proposed legislation has not yet been defined, but it is probable that it will be to place a tax on the manufacture and sale of wood alcohol, subjecting it to the restrictions which govern the manufacture and sale for nonbeverage purposes of ethyl alcohol, and requiring the holding of permits by those engaged in the traffic. There is no provision

in the internal revenue laws or in the National Prohibition Act regulating or affecting the manufacture, sale or distribution of wood alcohol, and the commissioner has no authority under present laws to regulate or restrict its use. The bureau of chemistry of the department of agriculture also has no effective control over the distribution of wood alcohol under the Pure Food and Drug Act, and new legislation is necessary if the federal government is to prohibit the use of wood alcohol as a beverage.

FOREIGN

The Nobel Prize in Medicine Not Awarded.—The Nobel prize in medicine has not been awarded since 1914.

Influenza in Spain.—Influenza is reported to have reappeared in Santander, Valencia, and other towns and to have caused many deaths.

Lepers Return Thanks.—A colony of lepers at Tarafangana, Madagascar, in a letter recently received, pays testimony to the relief extended by the American Red Cross.

Osler's Body Cremated.—The body of Sir William Osler, who died, December 29, was cremated, January 2. The urn containing the ashes will be taken to Oxford, and probably forwarded to his birthplace in Canada.

Lectures Before the Royal College of Surgeons.—The Thomas Vickery lecture was delivered by Sir John Tweedy, December 2, on "The Surgical Tradition," and the Bradshaw Lecture by Sir Charles Vallance, on "Surgery of the Heart."

Plague in Constantinople.—The *Wiener klinische Wochenschrift* quotes a press item from Saloniki to the effect that plague has appeared in Constantinople and the government of Greece has declared a four-day quarantine for travelers arriving from Constantinople.

Yellow Fever in Mexico.—Press reports state that an epidemic of yellow fever is reported in many cities and towns in Yucatan, Campeche, Chiapas, and Oaxaca, and that quarantine has been established at Tampico against Salina Cruz, Progreso, Frontera and other ports.

Personal.—Sir Donald MacAllister, superintendent of the British General Medical Council, has been invested by President Poincare, with the Cross of the Commander of the Legion of Honor.——Surg.-Gen. Sir Alfred Keogh and Sir Almroth E. Wright have had the honorary degree of doctor of science conferred on them by the University of Leeds.

League of Dispensing Physicians in Switzerland.—The *Correspondenz-Blatt* states that the physicians who dispense their own drugs in the by-ways of Switzerland's mountain fastnesses have combined to form a league of dispensing physicians to maintain their rights, and combat abuses, such as the sale of drugs by incompetent persons, and to obtain the advantages of collective purchasing, etc. The officers of the league include Dr Trösch of Biglen and Dr. Schaad of Herzogenbuchsee.

Deaths in the Profession Abroad.—Dr. **Troisier,** professor *agrégé* of clinical medicine at the University of Paris.——Dr. **J. Hoffmann,** professor of neurology at the University of Heidelberg.——Dr. **K. Moeli,** professor of forensic medicine at the University of Berlin.——Dr. **A. Onodi,** professor of laryngology at the University of Budapest, author of numerous works on the anatomy, physiology and innervation of the throat, aged 62.——Dr **F. Di Donato,** a physician of Rome who took the leading part in organizing mountain and seashore colonies for weakly children.

Typhus Relief in Poland.—For purposes of administration, Poland has been divided into six districts with headquarters, respectively, at Warsaw, Lodz, Kielce, Lublin, Lonzia and Lwow. The active operations for the elimination of typhus and other infectious diseases are being handled by the central committee of the ministry of public health, which consists of Col. Harry L. Gilchrist, M. C., U. S. Army, and Drs. Viktor Hyszkiewicz, and Ludwik Rajchman of the ministry of public health of Poland. Departments of propaganda, transportation, statistics, hospitalization, quarantine, finance and schooling have been established and a Polish official has been placed in charge of each department. Each district is divided into counties and at the head of each county is a medical officer of health appointed by the minister of public health. Lieut.-Col. Lee R. Dunbar, M. C., U. S. Army, has been appointed to take charge at Lublin; Lieut.-Col. Edward C. Register, M. C., U. S. Army, at Lwow, and Major Willis P. Baker, M. C., U. S. Army, at Kielce. These officers are closely associated with the Polish district medical officers and will conduct activities in cooperation with them. The personnel of the Polish Typhus Relief Expedition consists of twenty-two officers and 420 men with thirty-one trainloads of supplies, including 10,000 beds, equipment for 40,000 beds, 1,000 tons of soap, 50 tons of washing soda, 1,000,000 suits of underwear, all the mobile laundries and sterilizers of the American Expeditionary Forces, 320 ambulances, 320 touring cars, and 160 heavy trucks, a large quantity of drugs and other supplies purchased from the American Army in France, five complete hospital trains, and sixty-eight cars of American Red Cross supplies. Experts are setting up mobile steel laundries in eight of the large cities to provide cleansing facilities for the poor and needy. Hospital repair and construction units are at work in two of the sanitary bases of the worst infected districts. Four field columns, each of twenty enlisted specialists under commissioned officers of the Army are supervising the bathing and delousing at a rate of 800 each, daily. Hospitalization and quarantine operations are being conducted in many places in the south and east of Poland, and American property purchased by Poland is being conveyed from the warehouse in Warsaw to towns and communities designated at the rate of about ten truck loads a day. Word has been received from Col. Harry H. Snively, director of field operations, that at Lemberg, 50,000 people are waiting to be bathed and deloused. Five medical officers have been assigned to the quarantine station and military cordon, along the eastern border of Poland, and a strict quarantine is being placed along the border to prevent the large influx of refugees into Poland, before having been bathed and deloused.

The German Inhumanity at Lille.—THE JOURNAL mentioned at the time the protest signed by Calmette and four other members of scientific organizations who had remained at Lille during the long occupation by the Germans, and witnessed the "actes de barbarie" which they specified, saying in conclusion: "The high command in Germany willed the war, but the people in arms approved it, and resolutely waged war with the most ferociously cruel means, even the physicians with the army doing the most odious acts without a word of excuse, regret or pity." (THE JOURNAL, Dec. 28, 1918. Also in Paris Letter, March 8, 1919, p. 742). The *Deutsche medizinische Wochenschrift* of April 10, 1919, related that the matter was brought up in the Berlin Medical Socicty, and Calmette's protest and the resolutions voted thereon by the Académie de médecine at Paris were discussed. Dr. Fuld offered a resolution that the society should go on record as expressing its regret ("—das tiefe Bedauern —") at such happenings as were specified in the Calmette protest, but his suggestion was opposed by Orth and others, the speakers saying that there was no proof of the truth of the statements made by Calmette, and no voting should be done on a matter of which only one side had been presented. However a committee was appointed "nach einer ungeügelter 1 stündigen Geschäftsordnungsdebatte—" to report after obtaining an official copy of the resolutions that had been adopted by the Académie. The *Deutsche medizinische Wochenschrift* of Nov. 6, 1919, relates that this committee recently presented its report. It was in the form of a resolution which was adopted without a dissenting voice "—widerspruchslos angenommen." The members of the committee were Fuld, Kraus, Krause, Morgenroth and Schwalbe, the latter the editor of the *Deutsche medizinische Wochenschrift.* The resolution reads:

"Die Berliner medizinische Gesellschaft ist nicht in der Lage, über die Erklärung der Liller Professoren und der Akademie der Medizin sowie über die deutsche Rechtfertigungsschrift, 'Lille unter deutscher Verwaltung und die Kritik des Gegners', zu entscheiden. Sie steht aber nicht an, offen zu erklären, dass sie alle inhumanen Handlungen auf das schärfste missbilligt, wo, wann, und von wem sie begangen sein mögen. Diese Stellungnahme entspricht dem von der deutschen Aerzteschaft stets hochgehaltenen Geist der Medizin, jenem wahrhaft internationalen Geist, dem wir huldigen, dessen Anerkennung wir aber auch bei allen anderen Aerzten, gleichviel welchem Volke sie angehören, voraussetzen."

"The Berlin Medical Society is not in a position to pass judgment on the Manifesto of the Lille professors and the Académie de médecine and on the published justification issued by the German authorities, entitled 'Lille under German Rule and the Criticism of the Foe.' But the society does not hesitate to declare openly that it condemns in the most unqualified manner all inhuman actions, wherever, whenever, and by whomsoever they may be committed. This attitude corresponds to the spirit of medicine always held high by the German medical profession, that really international spirit to which we are loyal and to which we assume all other physicians are loyal wherever they may be and to whatever nation they may belong."

Government Services

Personnel of the Medical Department

For the week ending January 2, the Medical Corps contained 2,193 officers; the Medical Reserve Corps contained 4,249, an increase of eleven over the previous week.

MEDICAL OFFICERS, U. S. NAVY, RELIEVED FROM ACTIVE DUTY

ARKANSAS
Arkadelphia—Brown, C. C.

INDIANA
Indianapolis—Mitchell, E. H.

LOUISIANA
Spring Hill—Browning, B. L.

MISSOURI
Kansas City—Walker, J. C.

TEXAS
Houston—Flickwir, A. H.

UTAH
Salt Lake City—Marshall, H. L.

VIRGINIA
Covington—Gardner, F. P.

WISCONSIN
Racine—Colbert, C. N.

Cuban Order for Colonel Havard

President Menocal of Cuba has conferred the Cuban Order of Military Merit on Col. Valery Havard, M. C., U. S. Army, retired, in recognition of his work in sanitation in the Cuban Army.

Historical Division of Medical Department

A historical division, which will handle all matters pertaining to the medical and surgical history of the world war, has been created in the office of the Surgeon-General. Col. Charles Lynch, M. C., U. S. Army, has been designated as chief of the department and is assisted by Drs. Louis C. Duncan, M. C., U. S. Army, Raymond C. Turck, M. C., U. S. Army, and contract surgeons Casey A. Wood and Roy McAfee.

Hospital Ship Launched

The U. S. Hospital Ship *Relief* was launched at the Philadelphia Navy Yards, December 23, and was christened by Mrs. William C. Braisted, wife of the Surgeon-General of the Navy. The vessel is of 10,000 tons displacement, 433 feet long, has a speed of 60 knots, and a capacity for 500 patients with complete operating room and hospital equipment. An appropriation of $3,250,000 was made by Congress for the construction of this ship.

Examination for Army Medical Corps

The Surgeon-General of the Army announces that preliminary examinations for appointments in the Medical Corps, U. S. Army, will be held March 15, 1920, at various points throughout the United States, in the Philippine Islands, Hawaiian Islands, Panama Canal Zone, Porto Rico, France, Germany and Siberia. The vacancies in the Medical Corps now amount to about 725 and since the armistice, resignations have been accepted at a rate of about twelve a month. The requirements are that the applicant shall be a citizen of the United States, between 22 and 32 years of age, a graduate of a medical school authorized to confer the degree of doctor of medicine, and that he shall have had at least one year postgraduate hospital internship, the latter requirement being waived in the case of those who have served as commissioned officers for at least one year during the world war.

Awards of Distinguished Service Medal

The Distinguished Service Medal has been awarded to the following officers of the Royal Army Medical Corps:

Major Gens.—Sir Robert Jones, eminent orthopedic surgeon and chief of Division of Orthopedic surgery, British army. Placed at disposal of medical service of A. E. F. his eminent talents and broad experience in standardizing methods of treatment for sick and wounded and took active personal interest in class instruction of American medical officers.

Sir Anthony Bowlby, while serving with the B. E. F. in France devoted his time and energy toward cooperating with and unreservedly placing at disposal of the A. E. F. his eminent talents, broad experience and knowledge of general conditions in preventing wastage among our forces from wounds and disease. His research work in wound bacteriology and evacuation resulted in saving many lives among our sick and wounded.

Cuthbert Wallace, while serving with the B. R. F. in France, devoted time and energy toward promoting standard methods for efficient treatment of American sick and wounded.

Sir Henry Tnompson, director of the medical service, 1st British Field Army in France. Placed time and energy at disposal of A. E. F. The sanitary school maintained in his army for teaching front-line medical requirements was utilized for instruction of American medical officers sent to him by classes. The observation and experience gained by these student officers under his able supervision and guidance eventually resulted in saving lives of many American wounded.

Report of the Surgeon-General, U S. Army, for 1919

This report appears in two massive volumes containing in all 2,167 pages and covering the experience of the medical department of the United States Army for the year 1918. It records the expansion of the army from a group of less than 100,000 men to one of 3,500,000; transportation of more than 2,000,000 soldiers, with all necessary equipment and supplies, to Europe and the safe return of the vast majority to this country. In his report to the Secretary of War the Surgeon-General says: "It was only by the concentrated and combined efforts of the country, as a whole, that the undertaking was successfully accomplished." "Practically the entire medical profession of the United States," he says, "became the medical department of the army and navy." In his letter he recapitulates the organization of the army and the construction of hospitals for the care of the sick. The effect of the influenza epidemic plays a leading part. In summarizing his letter of transmission, Surgeon-General Ireland says:

1. The total number of admissions during 1918 for diseases for officers and enlisted men, American and native troops, was 2,422,362; for ordinary injuries, 182,789; and for battle injuries, 227,855.

2. The total number of deaths from disease was 47,384; from wounds received in battle (cases treated in hospital), 13,735; killed in action, and lost at sea, 34,359; from ordinary traumatisms, 3,500.

3. Including the deaths from 1917, there were 50,714 from disease and 52,423 as the result of injuries of various kinds, including wounded, killed in action, and lost at sea.

4. The total number of days lost from disease for the year was 40,692,302; from battle injuries 12,545,442; and from ordinary injuries 3,687,060. The average number of men absent each day of the year on account of sickness and injuries was 155,957. Seventy-one per cent. of the time lost was caused by disease, 6 per cent. by ordinary injuries, and 22 per cent. by battle injuries.

5. Since the soldiers of the Civil War for the United States Army were drawn only from the Eastern and Northern States, with a few from the Western States, if other conditions had been the same, the rates should have been lower for the first two years of the Civil War than the corresponding rates for the Army in 1917-1918, which was made up of troops from all sections of the country, including the colored.

6. For the first two years of the Civil War, as compared with 1917-1918, the admission and the death rates for disease was three and one-half times as high.

7. Comparing the rates for the Spanish-American War and the Philippine Insurrection, 1898-1899, with those for 1917-1918, the admission rate in 1898-1899 was a little over twice as high and the death rate about 20 per cent. higher.

8. The admission rate for the specific fevers and the diseases of the intestines (including diarrhea and dysentery) was twenty-nine times as high in 1861-1862 as in 1917-1918, and the death rate was 258 times as high.

9. For these diseases for 1898-1899 the admission rate was twenty-four times as high and the death rate 125 times as high as in 1917-1918.

10. For the acute infectious diseases (excluding influenza, pneumonia, and the common respiratory type) the admission rate for 1861-1862 was practically the same as in 1917-1918. The death rate in 1861-1862 was two and one-half times as high as in 1917-1918, but 8 per cent. lower in 1898-1899 than in 1917-1918.

11. The respiratory type, including influenza, pneumonia and the common respiratory diseases, had higher admission and death rates for 1917-1918 than for either 1861-1862 and 1898-1899.

12. Influenza, probably associated with virulent pneumonia, was epidemic during the latter part of 1917 in this country and in Europe. The epidemic wave declined during the cold, dry, winter weather, and increased again in the spring, after which time it again declined, but continued throughout the summer to rise again to the high point in the autumn months.

13. Influenza, combined with pneumonia and respiratory diseases, caused 17.33 per cent. of the total admissions for

diseases, and 82 per cent. of the total deaths. This type of disease was the most important cause of loss of time.

14. All of the epidemic diseases other than influenza, pneumonia and the common respiratory diseases declined after the first part of 1918. The rates for most of these diseases were lower during the first part of 1918 than during the latter part of 1917.

15. Approximately 5.6 per cent. of the men who came into the military service from civil life had a venereal disease.

16. Approximately 7.4 per cent. of all the men in the army were detected with a venereal disease some time prior to their leaving the United States.

17. Of this number three fourths had contracted the infection prior to coming into the military service.

18. Two thirds of all that were detected with a venereal disease in the entire army, during 1917-1918, brought the infection in from civil life.

19. The occurrence rate in Europe and in the United States of new cases of venereal diseases in the army was approximately the same.

20. The negroes in the United States had an admission rate for venereal diseases of seven times as high as the whites.

21. Practically 70 per cent. of the negro soldiers either had a venereal disease when brought in from civil life or contracted an infection during 1918.

22. Of the average number of colored soldiers who served in the United States during the year 1918, 4.6 per cent. had to be discharged for a venereal disease.

23. The rate for venereal diseases for the colored in countries other than the United States was slightly higher than the rate for the whites.

24. The nativity rates for venereal diseases for the negro soldiers from the South, as compared with the white soldiers from the South, show that the negro had approximately four times as much venereal disease as the whites from the same section.

25. The nativity rates for the white soldiers from the various sections of the country show that the white soldiers from the South had higher rates for venereal diseases than the white soldiers from other sections of the country.

26. The nativity rates show that the white soldiers from the South have higher rates for measles, mumps, cerebrospinal meningitis, bronchopneumonia, lobar pneumonia and influenza, and that the soldiers from the West and Northwest have higher rates for scarlet fever, diphtheria and German measles.

27. The soldiers from the Eastern States had lower nativity rates for mumps and measles, but the soldiers of the West and Northwest had lower rates for influenza, bronchopneumonia and lobar pneumonia and meningitis. This low standing of the latter states may possibly be due to the recent immigration to them.

28. The negroes have lower admission rates than the whites of the country at large for measles, German measles, scarlet fever, diphtheria and influenza, and much lower rates for these diseases than the whites from the South.

29. The negroes have higher rates for meningitis and tuberculosis than the whites from the entire United States, but approximately the same rates for them as the whites from the South.

30. The incidence rate for all forms of pneumonia, both primary and secondary, was nearly three times as high for the colored as for the whites of the entire country. The death rate was more than twice as high, but the case mortality was 20 per cent. lower.

31. As compared with the whites of the South, the negro had a nativity rate for the combined pneumonias of more than twice as high.

Following his letter of transmission, the Surgeon-General presents the statistics covering the health of the army; a tabulation of the strength of the army; a complete discussion of all of the large camps in the United States, thirty-seven in number; a vast department on infectious diseases occupying pages 618-1015, discussing the infectious diseases, as a whole, and as they affected various parts of the service; a separate discussion of the work of each of the special divisions of the Surgeon-General's Office, and, finally, the work of the expeditionary forces abroad. A significant feature of the report, as a whole, is the lack of personal mention of any medical officer in relation to the service done. This appears to have been the custom of similar reports in previous years. The extent of the compilation and its value as a reference work are, of course, permanent. The Surgeon-General's Office is to be congratulated on having issued such an important document in such good order and with such facility.

Foreign Correspondence

PARIS

Dec. 4, 1919.

Important Modifications of Disability Pensions

In a former letter (THE JOURNAL, May 17, 1919, p. 1479), I reported certain increases in military pensions. Since then a number of worth-while reforms in the military pension system have been introduced. For example, as regards the furnishing of proof that the wound or the disease in question was actually contracted in the service, the new law establishes the "presumption of origin" in favor of applicants for pension. This applies not only to the term of actual service but, if it is a question of disease, also to the six months following the demobilization. It suffices, in order to take advantage of the presumption of origin, that the applicant shall have made, within the time limit of six months, written application to the regional director of the army medical department. The burden of proof as to whether the wound or the disease in question was contracted in the service or not rests on the state.

On the other hand, the number of pensions to be allowed having been settled, there seemed to be a need of doing away with some of the formalities complicating payment. For instance, according to the laws and regulations as they formerly existed, the army medical department acted in the matter of pensions in a purely advisory capacity. Henceforth, it will be the duty of the army medical department to institute demands for pensions and to superintend all matters of a medicolegal nature until the decision of the pension board is reached. The personnel of the pension boards has of late been modified in such a manner as to give the weight of authority to the physicians, who formerly acted only in an advisory capacity (THE JOURNAL, June 28, 1919, p. 1929).

The instructions in regard to the examination of pension claims have also been simplified. The chief surgeons who act as chairmen of the pension boards have received instructions not to insist too strongly on finding the causes of the infirmities, unless there are elements in the case that might cause one to infer some cause extraneous to military service. The presentation of the hospital card of admission suffices to allow the presumption of origin to operate, when it is a question of disease, or to establish such origin if it is a wound that is being considered. The examination of pension claims is conducted now by two physicians instead of five as formerly. These two physicians devote themselves exclusively to the expert survey of pension claims. An interesting modification is the establishment of local sessions of the pension boards throughout the country. Applicants, especially those who are untransportable, may take advantage of these sessions and be examined at home. This also makes it possible for their family physician to render them aid, as is authorized by law. The applicant may, moreover, be excused from presenting himself in person, in which case the pension board may decide the case on the basis of written evidence. The number of pensions granted by the pension boards is constantly increasing. From 8,700 in January, 1919, the number rose to 40,000 in September, 1919, and now the number has passed the 150,000 mark.

Death of Physician in Accident

Dr. Jaugeas, assistant roentgenologist in the Saint-Antoine Hospital, has just met death under distressing circumstances. He had been called to the American Hospital at Neuilly to do some roentgenologic work. While he was occupied in adjusting the Coolidge tube in order to regulate the quality of the roentgen rays, a terrible deflagration occurred and Dr. Jaugeas was electrocuted on the spot. Jaugeas had been for seventeen years Dr. Béclère's assistant in the roentgenologic laboratory of the Saint-Antoine Hospital. In 1913 he published a valuable compendium on radiodiagnosis.

Industrial Diseases and the Workmen's Compensation Law

The senate has just passed a bill that had been previously approved by the chamber of deputies which provides that certain industrial diseases shall be brought within the scope of the workmen's compensation law. The law in the form approved by the senate recognizes only two diseases as having the character of industrial diseases, namely, lead and mercurial poisoning (saturnism and hydrargyrism). Provision is made, however, for the amplification of the law and the recognition of other diseases as industrial diseases. In

view of this ultimate extension of the law and also for the purpose of preventing industrial diseases, the law makes it compulsory for any physician who recognizes the existence of a disease presenting the characteristics of an industrial disease to report such to the minister of labor. For reporting such diseases, stub books are furnished physicians gratis, and reports are frankable.

The new law imposes a penalty of from 100 to 500 francs or imprisonment for from three days to six months on any one who by threats, gifts, promises of reward, or "ristourne" (underhanded rebates) on medical fees or pharmaceutical supplies made to injured workmen or to syndicates or associations, or to the heads of industrial enterprises, to insurance companies or to any other person, shall induce or attempt to induce the victims of industrial accidents or of industrial diseases to enter any clinic or any physician's office or any pharmaceutical laboratory and shall have thus attempted to deprive a workman of the liberty of choosing his physician or his pharmacist. This legislative action was taken on account of the shameful practices of a certain class of tricksters whose ranks have seemed to be growing the past few years.

A Medical Controversy

At the last general meeting of the Syndicat des médecins du département de la Seine, several members of this corporate body took the floor to attack the conduct, during the war, of certain men who are military surgeons by profession. Others went still further and preferred general charges against the army medical department, maintaining that during the war it had often shown itself inadequate to the task that rested on it. The president of the syndicat, Dr. Leredde, made the following suggestion: "The best thing to do will be to make an inquiry into the activities of the army medical department during the war, and for the Corps médical non militaire to consider the best way of reorganizing this service in agreement with the Union des syndicats médicaux." To this proposal the military surgeons by profession have replied, not without reason, that in that case the civilian physicians would be both plaintiff and judge.

The Milk Shortage in Paris and Vicinity

At no time since the beginning of the war have Paris and the department of the Seine been so inadequately supplied with milk as at present. Before the war (in 1913) 830,000 liters of milk were shipped in daily, and 115,000 liters were produced locally, which made the total daily consumption 945,000 liters. During the war and since, shipments from without, as well as local production, have continued to diminish, and, at the present time, Paris and its environs have become reduced to 473,000 liters, which is only 50 per cent. of the prewar supply. Besides, the population of Paris and its suburbs has increased considerably during the last few years, so that if the present supply of milk were divided equally among the inhabitants the per capita apportionment would be scarcely one-tenth liter.

M. Martel, chief of the veterinary and public health service of Paris and the department of the Seine, has recently called the attention of the Academy of Medicine to this state of affairs, pointing out at the same time the causes. This unfortunate situation is due, he states, to the systematic destruction of milch cows in the regions invaded by the enemy; to the misuse of milk in order to obtain certain derivative products by reason of the high prices secured for these (which explains why in the devastated regions of France milk is selling at 70 centimes [13 cents] per liter wholesale, while butter is sold for 18 francs per kilogram [$1.58 per pound]; to last summer's drouth, which caused an advance in the prices of various kinds of cow feed; to aphthous fever, which has been prevalent in numerous dairy sections of the country, and finally to the greed of certain producers who take advantage of the exigencies of the situation to boost the prices.

How is this milk shortage to be remedied? In the first place, as soon as spring opens, milch cows at reasonable prices should be placed at the disposal of the farmers of the devastated regions, while, at the same time, the carrying out of the provisions of the peace treaty with Germany should be hastened (especially as regards the surrender of the stipulated number of milch cows, is doubtless meant.—ED.). Furthermore, the order prohibiting the use of fresh milk and cream in cafés, tea rooms, etc., as reported in a previous letter (THE JOURNAL, Nov. 15, 1919, p. 1539) should be strictly enforced. It would perhaps be advisable, in order to enforce the requirements of this order, to prohibit in such establishments the sale of milk in any form whatsoever. It would also be well to prohibit, or at least to control, the manufacture of cream cheeses, the extraordinarily high prices of which permit the manufactures operating in Normandy to offer to milk producers prices such as the milk companies supplying the cities cannot hope to secure. Likewise, it would seem in place to prohibit on the market the listing of the so-called "extra" grade of veal, the production of which requires an excessive consumption of milk. An appeal must also be made to the conscience of the heads of families in order that the use of preferential milk tickets may be confined to those for whom milk, by reason of age or sickness, is an actual necessity.

Professor Pinard, also, has protested against the custom that prevails in certain sections of feeding young calves large quantities of milk, giving a single animal as much milk as five or six patients or fifteen babies would require.

For the study of the milk question the Academy of Medicine has appointed a commission composed of Professors Pinard and Ribemont-Dessaignes, Dr. De Fleury and M. Martel. At the instance of this commission, the Academy of Medicine has passed a resolution embodying four lines of action which it recommends be taken to cope with the situation: 1. The sale at cattle markets, abattoirs or meat shops of milk-fatted calves, so-called "veau de lait," should be prohibited. 2. The manufacture and sale of cream cheeses should be suppressed. 3. The order of Oct. 10, 1919, with respect to the use of fresh cream and milk, should be strictly enforced. 4. The prefecture of the department of the Seine should be requested to study out a system by which patients could secure without fail fresh milk at any time, and more particularly the prefecture should be asked to consider the feasibility of fresh milk being kept on hand by pharmacists and sold to those who produce medical prescriptions for it.

A Maternity Hospital for Unmarried Mothers

M. Herriot, the mayor of Lyons, has induced the general council of the department of the Rhone to appropriate the sum of 200,000 francs for an exceedingly humane project, namely, the establishment of a secluded maternity hospital which will be open without distinction to all unmarried prospective mothers. Thus far it has been equipped with forty-five beds.

LONDON

Dec. 17, 1919.

A Higher Qualification in Ophthalmology

The Council of British Ophthalmologists has issued a report on examinations in ophthalmology. At present there are examinations of two classes: (1) that in which ophthalmology forms part of a higher examination in medicine and surgery, as for the M.D. or M.S. of the University of London, and (2) that in which qualified physicians are examined independently of any examination in general medicine and surgery, as, the diploma in ophthalmology of the University of Oxford. The first examination in ophthalmology as a special subject was established by the Royal College of Surgeons of Edinburgh in 1883. In the examination for the fellowship, ophthalmology is compulsory. At the University of London, ophthalmology has recently been recognized as a special branch of the M.S degree, the candidate having had to spend at least two years in the study and practice of ophthalmology at an approved school for one year at least subsequent to obtaining the M.B., B.S., and to hold during this time for at least six months an appointment in the ophthalmic department of a recognized general or ophthalmic hospital. A circular letter was sent to the principal hospitals of the United Kingdom asking what professional qualificaitons were required for candidates for the post of ophthalmic surgeon. Most of them required higher qualifications in surgery, but these often did not imply a special knowledge of ophthalmology. Only five required this. In the present higher examinations there is seldom any adequate test of a candidate's knowledge of ophthalmology. The report concludes with the recommendation that the universities and colleges should provide a special examination in ophthalmology for those who propose to devote themselves to it. Ophthalmology should be one of the optional subjects which a candidate can elect to be examined in for the degree of Master of Surgery of a university or for the fellowship of a college of surgeons. Before presenting himself, the candidate should have studied ophthalmology for at least two years and held recognized ophthalmic appointments for one of these years. The special examination in ophthalmology should be written, oral and practical, and should comprise

anatomy, pathology, optics, systematic and clinical ophthalmology, and operative surgery.

Graduate Medical Teaching in London

The problem of graduate medical teaching in London continues to exercise the leaders of the profession. In a joint letter to the *Times*, Adami, Clifford Allbutt, Dawson, Arbuthnot Lane, Makins, Osler, and Rolleston point out that America and England are the only countries mutually interested in each other's history—so interested that the students of each are likely to seek graduate instruction in the other country—whereas every civilized country is interested in the science of health and is anxious to gain fresh knowledge wherever it can be found. Before the war, Germany and Austria, by their skilled and subtle propaganda, developed by enlightened government subsidy, had hypnotized the world into believing that medical graduates could complete their knowledge only in those countries. Americans, Frenchmen and even our own ambitious physicians took it as a matter of course that they must "finish" by sitting at the feet of the Teuton, who fed them with a *réchauffé* of what he had gleaned from England, France and America; for with few and rare exceptions no striking advance in medicine and surgery can be claimed by Teutonic workers. The war closed the German schools to the Allies, and very quickly it was discovered that we had better material at home if it could only be made available. Of this there has been convincing evidence in the year now ending. Soon after the armistice, the Fellowship of Medicine was founded to promote friendly relations between the members of the profession in the allied nations, and a graduate medical course was arranged in London to meet the wishes of a large number of medical officers of the dominions and the United States. The course was so successful that it is still maintained. But something more permanent is needed. The Post-Graduate Medical Association has been amalgamated with the Fellowship of Medicine. The immediate duty of the teaching hospitals is to teach undergraduates. Any satisfactory scheme for advanced training for graduates must provide not only for visitors from abroad but also for the home graduates who wish to extend their knowledge or to undertake research. It will therefore be necessary to have in London one or more graduate teaching hospitals, including laboratories. It is hoped that this proposal will receive the support of the board of education and the University Grants Committee. The object of the writers is to inform the public of what is needed and to enlist its sympathy. The project is of imperial significance, but cannot be accomplished by the medical profession and the staffs of the teaching schools without substantial help. Time will not permit of the building and equipment of a new hospital for the purpose. Before it could be finished, the students to be provided for would have wandered elsewhere in search of what they need. Before we could be ready, thousands would have found their way to Teutonic centers, which will make frantic efforts to regain what they have lost. In a single year American students alone spent more than $200,000 in Vienna. The writers therefore urge that the government should enable one or two large general hospitals in London to equip themselves exclusively for graduate work and that these should by cooperation with other medical schools provide themselves with such a staff as to be second to none, if not indeed superior to any in the world.

Insurance Scheme for Panel Physicians

The medical committees under the national health insurance act are devising an insurance scheme for providing physicians with certain benefits. It is urgently needed, as cases of distress are often reported. If a reservation of 12 cents per insured person were made, this would give, on an insured population of 14 millions, an annual income of $1,750,000. It is proposed to form a society and to ask the government to pay into it a certain sum, either 12 or 24 cents a year, in respect to each insured person. It would be managed by a committee of physicians and actuaries. The benefits proposed are: (1) $500 to cover funeral and similar expenses; (2) a sum of money to be paid when a member reaches the age of, say, 65, or previously if death occurs; (3) a pension payable from a fixed age for the remainder of life; (4) sums to meet the education of children, temporary financial difficulties, the purchase of a practice, a house, etc.; (5) money to be paid to a member on leaving the organization through ceasing to be a panel physician before reaching the fixed age; (6) a lump sum or a pension payable to a member compelled to retire owing to ill health before he becomes entitled to the ordinary scale of pension.

MEXICO CITY

Dec. 21, 1919.

The Academy of Medicine

At the meeting held on the third instant by the Academy of Medicine, the guest of honor was Dr. Theodore C. Lyster, colonel (retired) of the Medical Corps of the United States Army and a member of the yellow fever commission of the Rockefeller Foundation. At the same meeting there was exhibited one of the preparations of *Leptospira icteroides*, and Dr. Cervera described in detail Noguchi's scientific work, discussing especially that part relating to the etiology of yellow fever. In his opinion this question has been solved, as the only thing remaining to be done is to have other workers confirm Noguchi's statements which comply fully with Koch's postulates relative to the discovery of pathogenic organisms, and in addition other requirements have been fulfilled which were unknown in Koch's epoch. After other persons discussed the work done in Mexico to eradicate yellow fever, Dr. Lyster spoke in Spanish to describe the work he has performed in different places in Central and South America and the results obtained in his campaign against this disease. In concluding he expressed his thanks to the Academy for the many attentions he had received, which showed that among the scientists of this country there is no ill feeling towards the United States. In the meeting of the 17th, on motion by Dr. Monjarás, Dr. Hideyo Noguchi was elected unanimously, honorary member of the Academy in recognition of the meritorious services rendered by him to science and humanity.

Yellow Fever

This disease is still present in the state of Yucatan and it seems even to be spreading as the board of public health has reported one case in the port of Campeche and placed that city in quarantine. On the other hand, it has been confirmed that the cases that occurred in the southern part of the state of Sonora were of malaria and not yellow fever.

Noguchi in Mexico

Dr. Noguchi has just landed at the port of Progreso from which he will proceed to Merida in order to carry on confirmatory studies of his discovery of *L. icteroides* and to try on a larger scale the curative properties of the specific serum prepared by him. It is expected that his efforts may contribute to eradicate yellow fever from Yucatan and amplify our bacteriologic and therapeutic knowledge of this disease.

Personal

On December 11 Dr. Gregorio Mendizábal celebrated the fiftieth anniversary of his entering the practice of medicine, receiving on this occasion many tributes. The Association "Escobedo" held a meeting in his honor and finally the physicians of the city of Orizaba, where he was born, have invited him to spend a few days there as their guest.——Dr. A. Lozano Garza, lieutenant-colonel of the medical corps, has been designated by the government to proceed to the United States to study with other persons the operation of the institutes devoted to the training of abnormal children.

Marriages

LEWIS WELLS JOHNSON, Asst. Surg., Lieut. (j. g.), U. S. Navy, Chelsea, Mass., to Miss Mildred E. Stevens, at Manchester, N. H., December 22.

BELLENDEN SEYMOUR HUTCHESON, V. C., Capt., C. A. M. C., Cairo, Ill, to Miss Frances Young of Kentville, Nova Scotia, December 1.

JOSEPH CLARK STEPHENSON, Norman, Okla., to Miss Alice Marie Gerlach of Woodward, Okla., December 27.

WILLIAM EDWARD MORGAN, Longmont, Colo., to Miss Venice Zajicek of West Point, Neb., November 6.

DAVID RALPH BOWEN, Philadelphia, to Miss Edith Mary Warrington of Georgetown, Del., December 29.

THURMAN ROSS BEAVER, Akron, Ohio, to Miss Lillian Catherine Arnold of Rockford, Ill., December 8.

WILLIAM EUGENE KENDALL, Oak Park, Ill., to Miss Jessie May Thorpe of El Paso, Ill., December 26.

ANDREW JACKSON CLAY, Hoxie, Ark., to Miss Enid Laveta of Hugo, Okla., December 25.

HOWARD KAYLOR, Bluffton, Ind., to Miss Ella Cary of Pennville, Ind., November 11.

Deaths

Horatio C. Wood, Philadelphia; University of Pennsylvania, Philadelphia, 1862; aged 78; successively professor of botany, therapeutics, clinical professor of diseases of the nervous system, and emeritus professor of therapeutics in his alma mater; editor of *New Remedies* from 1870 to 1873; of the *Philadelphia Medical Times,* from 1873 to 1880; of the *Therapeutic Gazette,* from 1884 to 1890; and of the *United States Dispensatory* from 1893 to 1907; president of the Pharmacopoeial Convention of the United States from 1890 to 1910; and of the College of Physicians of Philadelphia, in 1902-1903; author of standard works on materia medica and therapeutics, and nervous diseases and their diagnosis; who was given the honorary degree of LL.D. by Lafayette College in 1883, by Yale University in 1889 and by the University of Pennsylvania in 1904; died, January 3.

Mitshell Otis De Vaney ⊕ Indianapolis; Medical College of Indiana, Indianapolis, 1901; aged 40; lieutenant, M. C., U. S. Army, with services on the Mexican boarder and at Camp Taylor, Louisville, Ky., and honorably discharged, Jan. 9, 1919; associate medical director of the Indianapolis Life Insurance Company; formerly secretary of the Marion County health board; was drowned, December 30, when the automobile which he was driving ran over a 30-foot embankment, near Fall Creek, pinning Dr. De Vaney underneath the machine.

Thomas Jefferson B. Rhoads, Boyertown, Pa.; Jefferson Medical College, 1861; aged 82; a member of the Medical Society of the State of Pennsylvania; assistant surgeon of the 169th Pennsylvania Volunteer Infantry during the Civil War; president of the National Bank of Boyertown, and later of the Farmer's National Bank of Boyertown; president of the Boyertown Mutual Fire Insurance Company; died December 24, from heart disease.

Dwight Seymour Spellman, New York City; College of Physicians and Surgeons, Baltimore, 1889; aged 53; a member of the American Medico-Psychological Association; assistant senior physician and since 1889 a member of the staff of the Manhattan State Hospital, Wards Island; while skating at Tom's River, N. J., December 18, broke through the ice, and before assistance arrived, died from shock.

Jesse Fonda Millspaugh, Los Angeles; University of Pennsylvania, Philadelphia, 1883; aged 64; president of the Minnesota State Normal School, Winona, from 1899 to 1904, and of the California State Normal School, Los Angeles from 1904 to 1913, and president emeritus since that time; a member of the California State Board of Education from 1904 to 1912; died December 13, from pneumonia.

George Elliot Chamberlain, South Newbury, Vt.; Dartmouth Medical School, Hanover, N. H., 1896; aged 50; acting assistant surgeon, United States Army, from September, 1898, to December, 1902, with service in Cuba and the Philippine Islands during and after the war with Spain; captain M. R. C., U. S. Army, and discharged, March 27, 1918; died in a hospital in Cambridge, Mass., December 14.

Frank W. Wyman, Stroud, Okla.; College of Physicians and Surgeons, Keokuk, Iowa, 1877; aged 71; a member of the Oklahoma State Medical Association; a surgeon in the United States Indian Service for many years, and government physician at the Sac and Fox Agency for more than twenty years; died at the home of his daughter in Detroit, December 19.

Robert Mason Fuller, Schenectady, N. Y.; Albany (N. Y.) Medical College, 1865; aged 75; a member of the Medical Society of the State of New York; said to have been the originator of the idea of administering medicine in tablet form; surgeon of U. S. Volunteers during the Civil War; died December 28.

Warren Cushman Hewitt, Xenia, Ohio; Homeopathic Hospital College, Cleveland, 1888; aged 54; a member of the Ohio State Medical Association; for sixteen years resident physician to the Ohio Soldiers' and Sailors' Home, Xenia; died December 18, from heart disease.

George A. B. Hays ⊕ Happy Jack, La.; Tulane University, New Orleans, 1874; aged 72; for many years superintendent and chief physician of the East Louisiana Hospital for the Insane, Jackson, and the Louisiana Hospital for the Insane, Pineville; died December 20.

John Houstoun M. Clinch ⊕ Danville, Ill.; University of Oregon, Portland, 1896; aged 56; a member of the medical staff of St. Elizabeth's Hospital; while driving in his automobile over a grade crossing in Danville, December 24, was struck by a train and instantly killed.

Daniel Murray Cheston, West River, Md.; University of Pennsylvania, Philadelphia, 1864; aged 76; who fractured both arms and his nose, from a fall, while visiting in Chestnut Hill, Philadelphia; died from his injuries in the Chestnut Hill Hospital, December 22.

Edwin Augustus Down, Hartford, Conn.; College of Physicians and Surgeons in the City of New York, 1887; aged 64; a member of the Connecticut State Medical Society; for ten years president of the state board of charities; died December 22, from heart disease.

Charles Albert Folsom, Epping, N. H.; Dartmouth Medical College, Hanover, N. H., 1902; aged 45; a member of the New Hampshire Medical Society and New Hampshire Surgical Club; until a year ago a practitioner of Manchester, N. H.; died December 16.

Robert Dodds ⊕ Escondido, Calif.; formerly of Chicago; Northwestern University Medical School, Chicago, 1890; aged 63; a specialist in gynecology; died in the Sanitarium Escondido, December 18, from sclerosis of the cortex with spastic paralysis.

Joseph Alexander Doyle ⊕ Greenville, Pa.; Western Reserve University, Cleveland, 1893; aged 57; lieutenant, U. S. N. R. F., and relieved from active duty, July 11, 1919; died September 5, from valvular heart disease.

Joseph Johnston Fleming, Wickenburg, Ariz.; Cleveland College of Physicians and Surgeons, 1898; aged 47; chief surgeon of the Rio Grande Mines Company; died at Pierce, Ariz., October 22, from myocarditis.

Frank Atwater Stove ⊕ Bowling Green, Ohio; Ohio Medical University, Columbus, 1904; aged 46; lieutenant, M. R. C., U. S. Army, and honorably discharged, Oct. 25, 1919; died December 18, from carcinoma.

Charles R. Rosendale, Bowling Green, Ohio; Eclectic Medical Institute, Cincinnati, Ohio, 1856; aged 87; died at the home of his daughter in Bowling Green, December 15, from senile debility.

William B. Van Note ⊕ Lima, Ohio; Medical College of Ohio, Cincinnati, 1895; aged 52; a specialist on diseases of the eye; died at Miami, Fla., December 20, from pneumonia.

William B. Ellis, Concord, Mo.; Homeopathic Medical School of Missouri, St. Louis, 1888; aged 73; a Confederate veteran; also a dentist; died December 20, from heart disease.

William Edward Hodges, Bynum, Texas (registration, Texas Fifth Judicial Board of Medical Examiners, 1901); aged 59; died December 10, while making a professional call.

Thomas A. Crawford, Rock Hill, S. C.; Hospital College of Medicine, Louisville, Ky., 1877; aged 66; a member of the South Carolina Medical Association; died November 11.

Herbert Orray Benner ⊕ Framingham, Mass.; Dartmouth Medical School, Hanover, N. H., 1896; aged 55; died in the New England Baptist Hospital, Boston, recently.

Frederick Halves, Brooklyn; Bellevue Hospital Medical College, 1870; aged 79; died at the home of his daughter in Brooklyn, December 21, from heart disease.

O. M. Norman, Roseville, Ohio; Cincinnati College of Medicine and Surgery, 1873; aged 88; a member of the Ohio State Medical Association; died December 18.

Norman L. Lee, Junction City, Ore.; Willamette University, Salem, Ore., 1871; aged 82; a veteran of the Civil War; died October 24.

Wilhelmina F. O'Connor, Denver; Denver College of Physicians and Surgeons, 1898; aged 71; died December 8, from heart disease.

Josiah W. P. Jarvis ⊕ Fairview, W. Va.; Baltimore University School of Medicine, 1895; aged 66; died December 12.

Dumont Durant Howell, Stillwater, Okla.; University of Nashville, Tenn., 1903; aged 45; also a banker; died December 6.

Carl Henry Golbeck, Chicago; University of Illinois, Chicago, 1913; aged 29; died December 21, from acute endocarditis.

Robert Suttenfield Lipes, Hudson, N. Y.; Albany, N. Y., Medical College, 1907; aged 39; died December 9, from myocarditis.

⊕ Indicates "Fellow" of the American Medical Association.

The Propaganda for Reform

IN THIS DEPARTMENT APPEAR REPORTS OF THE JOURNAL'S BUREAU OF INVESTIGATION, OF THE COUNCIL ON PHARMACY AND CHEMISTRY AND OF THE ASSOCIATION LABORATORY, TOGETHER WITH OTHER MATTER TENDING TO AID INTELLIGENT PRESCRIBING AND TO OPPOSE FRAUD ON THE PUBLIC AND ON THE PROFESSION

MORE MISBRANDING

King's Kidney Remedy.—George L. King, Kingfisher, Okla., shipped in December, 1916, a quantity of nostrum called "King's Kidney Remedy." The Bureau of Chemistry analyzed this preparation and reported finding uva-ursi, sarsaparilla, cascara, gentian, senna, poke root, buchu, wild cherry bark, dandelion, yellow poplar, stillingia, hydrangea, and possibly, in addition prickly ash, black cohosh, golden seal and coriander. The stuff was sold under the false and fraudulent claim that it was an effective remedy for lumbago, rheumatism, sciatica, neuralgia, diabetes, dropsy and any irregularity of stomach, liver, kidneys or urinary organs, "when in truth and in fact it was not." In September, 1918, the defendant pleaded guilty and was fined $25 and costs.—[*Notice of Judgment No. 6516; issued Dec. 29, 1919.*]

Miscellaneous Tablets.—In September and November, 1917, the United States Drug Manufacturing Co., Philadelphia, shipped a number of different tablets which the federal authorities declared were adulterated and misbranded. Acetphenetidin and Salol Tablets, when analyzed, were found to have an average shortage of acetphenetidin of over 20 per cent. and an average shortage of salol of over 18 per cent. Tablets containing Acetylsalicylic acid, Acetanilid and Caffein Citrate were found to have an average shortage of acetylsalicylic acid of 9 per cent., an average shortage of acetanilid of 9.5 per cent. and an average excess of caffein citrate of over 40 per cent. Tablets of Morphin Sulphate were found to have an average shortage of the amount claimed of over 62 per cent. Tablets of Acetanilid and Salol were found to have an average shortage of the former drug of about 11 per cent. and of the latter of over 21 per cent. In November, 1918, the United States Drug Manufacturing Co. entered a plea of guilty and was fined $25.—[*Notice of Judgment No. 6548; issued Dec. 29, 1919.*]

Casey's Rheumatic Cure.—In October, 1917, the John H. Casey Medicine Co. of Hillyard, Wash., shipped a quantity of "Casey's Rheumatic Cure—The Great Montana Remedy" which was misbranded. The Bureau of Chemistry analyzed this preparation and found it to consist essentially of a water-alcohol solution of potassium iodid, sugar and drug extractives carrying saponin (sarsaparilla indicated), emodin, volatile oil and resins. It was falsely and fraudulently represented as a cure for rheumatism, diseases of the blood and kidneys, Bright's disease and a remedy for stomach trouble, heart trouble, and impure blood. In addition to these fraudulent claims the amount of alcohol present was falsely given and it was falsely declared to be a "Purely Vegetable Compound, Contains No Mineral," when as a matter of fact it contained potassium iodid. In February, 1919, the John H. Casey Medicine Company pleaded guilty and was fined $25.—[*Notice of Judgment No. 6549; issued Dec. 29, 1919.*]

Miscellaneous Capsules.—In February, May and June, 1917, Joseph McManus, who did business under the name of Philadelphia Capsule Co., Philadelphia, shipped a number of articles which were declared to be adulterated or misbranded or both. Some capsules labeled "Grip Pans" were declared by the company to contain "acetanilid derivative 125 grs. to the ounce . . . phenysal 1½ grs., salipyrine, 1 gr." The federal chemists found that these capsules contained no acetanilid derivative, phenysal or salipyrine. They did contain acetanilid (28.15 per cent.) and the label failed to bear a statement of the quantity or proportion of this drug as the law requires; they also contained ammonium salicylate, 37.38 per cent. and sodium bicarbonate, 25.52 per cent. Capsules labeled "Aspirin 5 grains," contained only 3.585 grains each, or a shortage of 28 per cent. "Mixed Treatment Capsules" declared to contain 5 minims of syrup ferrous iodid and 2 minims of solution arsenous and mercuric iodids, actually contained not more than 3.72 minims syrup ferrous iodid and 0.52 minim solution arsenous and mercuric iodids. "Sedative Capsules," according to the label, each contained ammonium bromid, 2½ grains, sodium bromid, 2½ grains and potassium bromid 2½ grains; actually the capsules contained less of each of the bromids than the label declared; also the boxes of capsules instead of containing 200 as labeled, contained only 172. "Codeiphen Capsules" according to the label, contained 3 grains of acetphenetidin each, when, as a matter of fact, they contained no acetphenetidin. The capsules did, on the other hand, contain codein, the quantities or proportions of which were not declared as the law requires. Capsules known as "Migraine, Pref. No. 2," were misbranded in that the bottle declared the presence of 200 capsules when only 186 were found and for the further reason that the capsules contained acetanilid but the label failed to give the quantity or proportion of this drug. Capsules labeled "Salol and Acetphenetidin" were misbranded in that the quantity or proportion of acetphenetidin was not declared as required. In December, 1918, Joseph McManus entered a plea of *nolo contendere* and was fined $150.—[*Notice of Judgment No. 6550; issued Dec. 29, 1919.*]

Correspondence

"CREDULITY AND CURES"

To the Editor:—The admirable article of Dr. Frederick Peterson (THE JOURNAL, Dec. 6, 1919, p. 1737) is so clearly and entertainingly written and, on the whole, so sane and strong, that a certain error in it might, if not corrected, tend to do much harm by misleading practicing physicians. I refer to the implied condemnation of the prescription of glasses for the remedy of certain reflex nervous disturbances by the relief of eye strain. In his reasoning, the gifted author strangely seems to have fallen into the fallacy termed by logicians "non sequitur."

One might, for example, argue in this fashion:

Freudian psychanalysis is ill founded and repulsive.
Freudian psychanalysis is advocated by certain neurologists.
Ergo, all neurologists are untrustworthy.

But it is quite evident that the conclusion does not follow from the premises. The correct conclusion is: Those neurologists who advocate freudian psychanalysis are mistaken, and not to be followed in that respect.

Concerning eye strain and its relief, Dr. Peterson's syllogism is practically as follows:

Certain ophthalmologists formerly practiced a wrong method (operation) for the relief of muscular imbalance of the eyes.
Another ophthalmologist pointed out a different and correct method (prism exercises) of remedying muscular imbalance, and also called attention to the importance of correct refraction in the relief of reflex disorders provoked by eye strain, and especially of disorder dependent on small degrees of astigmatism.
Ergo, the second ophthalmologist was wrong.

The reality of eye strain as a provocative condition, in certain persons, of many sorts of reflex disturbances, surely cannot be doubted at this period of medical observation. We have all seen migraine, various forms of tic, persistent headache, recurrent vertigo, and gastro-enteric, cardiovascular and nervous disturbances of many kinds relieved for long periods, and sometimes permanently, by the use of lenses prescribed after careful measurement and adjustment to the needs of the particular case. This is an everyday commonplace of medical experience, and needs no elaboration. Neurasthenia—the "fatigue neurosis" of Dercum—is a reality; but many cases are miscalled neurasthenia and the patient vainly submitted to rest cures, in which, later, a

correct diagnosis of eyestrain is followed by relief through correctly measured and properly adjusted lenses. Does this prove that there is no such thing as neurasthenia or no value in rest cures? Not at all. But it does indicate that neither the ophthalmologist nor the neurologist who makes a correct diagnosis can be blamed for his confrères who do not make correct diagnoses.

The same thing may be said concerning hysteria, with this addition: that in certain persons predisposed to hysterical manifestations, unsuspected and uncorrected visual error—commonly hyperopic astigmatism, but not confined to that—will provoke such disturbances; while its relief will tend toward quieting them.

When the history of American medicine comes to be written by an impartial and broad-minded observer, I am quite sure that the names of Weir Mitchell, William Thomson and George M. Gould will be jointly honored for their contributions to this field of diagnosis and therapeutics—Mitchell and Thomson for the discovery and demonstration of the possibilities of eye strain as a provocative of various forms of reflex disorder, and Gould for his enlargement of the field and for the courage with which, in the face of difficulties and discouragements innumerable, he has persisted in preaching the truth. That he has used violent language in his preachments may be admitted and regretted; but I am tempted in this connection to quote the comment of Henry Adams on Lowell's criticism of John Bright:

> As the party rose from the table and passed into the drawing room, Adams said to Lowell that Bright was very fine. "Yes!" replied Lowell, "but too violent!"
>
> Precisely this was the point that Adams doubted. Bright knew his Englishmen better than Lowell did—better than England did. He knew what amount of violence in language was necessary to drive an idea into a Lancashire or Yorkshire head. He knew that no violence was enough to affect a Somersetshire or Wiltshire peasant. Bright kept his own head clear and cool. He was not excited; he never betrayed excitement.

Perhaps the future historian may conclude that Gould knew better than the rest of us "just what amount of violence in language was necessary to drive an idea into the [*medical*] head."

S. Solis Cohen, M.D., Philadelphia.

MEDICAL VETERANS OF THE WORLD WAR

To the Editor:—The beginning of this war found the medical profession of the country wholly unprepared for the tremendous military responsibilities which were to be thrown on it. No organization had been perfected by which the profession could be called into service, and no instructions had been given to the profession to acquaint them with the duties of a medical officer in the field with troops.

The Medical Department of the Army had been accumulating for many years field medical supplies, and through the great foresight of Col. Jefferson R. Kean, Medical Corps, the American Red Cross, with which he was serving, had organized a large number of base hospital units from among the staffs of our large and important civil hospitals.

The Medical Reserve Corps had not been developed, and the officers who were in this corps and who were fit for military service had not been instructed in their duties as medical officers. This laid a tremendous task on the Medical Department to meet the emergency when war was declared in April, 1917.

The response the profession made to the emergency was superb. We are all proud of the manner in which the country as a whole met its obligations. And we are all proud of the manner in which special organizations met their obligations. But I am sure it is a fair statement that no part of our country met its call in the superlative manner the medical profession met theirs.

At the beginning of the war there were about 450 officers of the Medical Corps and something like 2,000 officers of the Reserve Corps. Many of the latter were not physically fit for military service, and some were essential to the welfare of their communities. But through the tremendous efforts of all concerned, medical officers were obtained in sufficient numbers to meet the demands as they arose.

The medical men who came into the corps brought with them the finest spirit that ever existed in any organization. It was the spirit of service, which enabled them to meet their new duties in a most admirable way. When the armistice was signed, there were more than 30,000 physicians in active service. This does not include the hundreds of physicians who were assisting the Provost Marshal in executing the draft and in doing other essential work necessary to carry on the great war. These officers have been demobilized just as rapidly as the interests of the service would permit, so that today there are only 1,200 temporary officers remaining.

Americans, as a people, have the very highest ideals regarding the quality of medical and surgical treatment that is due our soldiers, and it is only fair to state that the greatly enlarged Medical Corps was able to meet their ideals in every respect. There were some complaints at the beginning when troops were rushed into camp before adequate provisions could be made to care for the sick; but careful investigations, which were made, revealed the fact that the medical man had met his emergency as well as it was humanly possible to do with the facilities at hand. In France the American soldier was cared for as no other soldier was ever cared for. I think this can be said with perfect fairness, but with the understanding that we started with the advantage of the information our allies had accumulated during their three years of war. The wounded man was treated by the most expert surgeons of this country, and the man who fell ill from disease was cared for by the best internists of the land. The sick and wounded who were brought back to the United States have been treated in the best equipped hospitals this country has ever seen. The number now remaining under treatment in our hospitals is so small that it is almost a negligible quantity.

The effort this country made in meeting the responsibilities of war was the greatest thing that has occurred in our history, and the part the medical profession played has only added another bright page to the traditions of which we are so proud. I am sure every medical officer should be proud of having had an opportunity to play even a very small part in the tremendous effort which has been carried on since April, 1917.

And now that the profession has returned to its duties in civil life, I think it would be a tremendous mistake if we should not band ourselves together in some organization which would perpetuate the traditions of this great war, which would keep us in closer touch in the future, and which would keep alive an organization which would meet any obligations which the profession might be called on in the future to discharge to our government. I know of no better way of carrying on these principles than for all of us to become active members of the Medical Veterans of the World War, an organization composed exclusively of those who served in the Medical Department of the federal government.

M. W. Ireland, M.D., Washington, D. C.
Surgeon-General, U. S. Army.

Ocular Complications of Vaccination Against Typhoid.—A case of febrile herpes of the cornea developing a few hours after antityphoid vaccination is reported by Dr. F. M. Fernández in his *Revista cubana de oftalmología*, page 592. The issue of the *Revista* containing it is the fourth number of this new quarterly, and has 229 pages and twenty-eight original articles. Dr. R. Pacheco Luna of Guatemala also reports, page 600, a somewhat similar case in which a man of 52 had a relapse of herpes of the cornea after vaccination against typhoid. The first attack had been three years before. Pacheco Luna reviews the literature on the subject, and states that his case proves that herpes of the cornea is not due directly to the typhoid vaccine: in some of the cases on record it was evidently merely a coincidence. He adds that it is better to refrain from the vaccination when there is a history of preceding disease of the uveal tract, especially in the syphilitic, tuberculous, rheumatic, etc. There does not seem to be any ocular lesion which depends solely and exclusively on the typhoid vaccine.

Queries and Minor Notes

ANONYMOUS COMMUNICATIONS and queries on postal cards will not be noticed. Every letter must contain the writer's name and address, but these will be omitted, on request.

THE METRIC SYSTEM

To the Editor:—1. What action has the American Medical Association taken regarding the adoption of the metric system both in this country and as a world wide standard of weights and measures? If possible, give me date and place of action taken.

2. What is the procedure for bringing this important subject before our association? WILLIAM H. QUAY, M.D., Townsville, Pa.

ANSWER.—1. THE JOURNAL, May 18, 1895, p. 766, in the official reports of the proceedings of the forty-sixth annual session, held in Baltimore in 1895, reports:

The General Business Committee endorses the following recommendations from the Section on Materia Medica and Pharmacy:

Resolved, That in view of the adoption of the Metric System in the U. S. Pharmacopeia, this section recommends the more thorough instruction of the students at the medical schools in the use of metric weights and measures, and further recommends that physicians, when writing metric prescriptions, always make use of the signs Grm. and Cc. to distinguish between quantities by weight and volume.

2. New business may be presented in the House of Delegates by any delegate in attendance at a meeting. The ideal procedure for submitting a proposition is to present it first to a component county society that a memorial on the question may be addressed to the constituent state or territorial association. Then, if approved, its delegation will submit the subject to the House of Delegates of the American Medical Association.

BRAZILIAN WORK ON SNAKE VENOMS

To the Editor:—In THE JOURNAL, Aug. 23, 1919, p. 629, in the answer to a query from W. T. P., an injustice is done to Brazilian scientists. The question referred to snake venoms, and the inquirer requested bibliographic information on this subject. The answer mentioned twelve authors, and no mention is made of Brazilian works on this subject. I wish to state that the "ophidism" (as we call it here) is a matter absolutely solved by Brazilian scientists, among whom stands out the name of Dr. Vital Brazil Mineiro da Campanha, the discoverer of the antivenom serums. At present in Brazil, the only ones who die from snake bites are those who wish to do so.

D. DE MORAES LIMA, M.D., Ribeirao Preto, Brazil.

COMMENT.—Our list was a suggestive one and by no means complete. Among South American references might have been included the following from Brazil:

Brazil, Vital: Sobre un novo tratamento organotherapico do ophidismo do Dr. Ernst von Bassewitz, *Rev. med. de S. Paulo* **7**: 25, 1904; Ophidismo no Brazil, *Brazil-med.* **20**: 7, 1906; Serum anti-ophidico, ibid. **17**: 384, 1903; Da serumtherapia no envenamento ophidico, ibid. **18**: 21, 31, 1904.

Barroso, S.: Mordeduras de cobra e seu tratamento, Rio de Janeiro, 1889.

Villela, E.: Antiscorpion serotherapy, *Brazil-med.*, May 25, 1918.

Pinto: Campaign Against Snake Poisoning in Brazil, *Brazil-med.*, July 8, 1916.

Effective Treatment of Tuberculosis.—The physician is a life saver who promptly prescribes what may be required to prevent the incipient case of tuberculosis from becoming a plain case.—*Bull. Maine State Dept. of Health*, October, 1919.

Medical Education, Registration and Hospital Service

COMING EXAMINATIONS

CALIFORNIA: Los Angeles, Feb. 16-19. Sec., Dr. Chas. B. Pinkham, 906 Forum Bldg., Sacramento.

INDIANA: Indianapolis, Feb. 10-13. Sec., Dr. W. I. Gott, 84 State House, Indianapolis.

KANSAS: Topeka, Feb. 10. Sec., Dr. H. A. Dykes, Lebanon.

NATIONAL BOARD OF MEDICAL EXAMINERS: St. Louis and Chicago, Feb. 18-25. Sec., Dr. J. S. Rodman, 1310 Medical Arts Bldg., Philadelphia, Pa.

NEW YORK: New York City, Albany, Buffalo, Syracuse, Jan. 27-31. Asst. Professional Examinations, Mr. H. J. Hamilton, Albany.

VERMONT: Burlington, Feb. 10-12. Sec., Dr. W. Scott Nay, Underhill.

EFFICIENT HOSPITALS

ASA S. BACON
Superintendent, Presbyterian Hospital
CHICAGO

Hospitals are often compared to hotels; but while they are, in a sense, hotels for the sick, there is a distinct difference between the two from the patient's standpoint. A man goes to a hotel prepared to pay for his accommodation: he is usually on a business or vacation trip. Sickness comes to a man unexpectedly and catches him unprepared: he is sent to a hospital unprepared: he is not on a business or vacation trip. His salary is often discontinued. If a well man does not like his hotel accommodations, he can go elsewhere; but a sick man entering a hospital has to take what he can get. The man in moderate circumstances, unable to pay for an expensive room, must take a ward bed, which his sensitive condition causes him to rebel against, and the physician wastes a great deal of valuable time in getting his patient properly located. A patient came to my office the other day to say good-by. He told me about the kind attention he had received from physicians and nurses, but he added, "When I return, put me in a closet rather than in the ward."

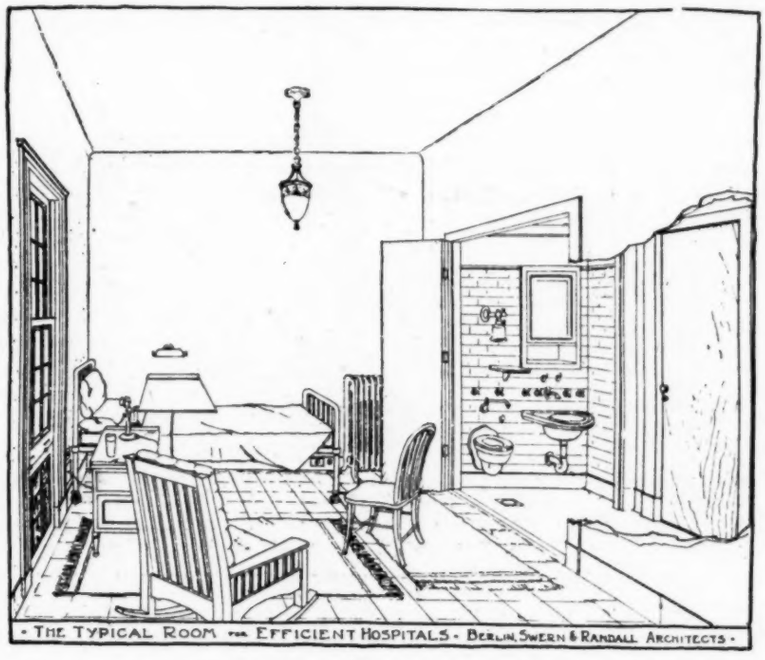

Fig. 1.—Typical room in perspective.

Wards are intended for the poor people, for charity patients or for those who can pay but a small amount. Labor conditions have so changed that the average working man does not want charity. The labor leaders frown on it and ask for a sufficient wage to enable the laborer to pay for his care, and they are going to get it. It is now evident that national prohibition is also going to be an important factor in reducing charity work.

When a man is sick, his earning capacity is cut off. He is a nonproducer. It is the duty of the hospital to get him well in the quickest time possible, so that he can get back to work and begin producing.

To provide efficient hospitals to serve the people in moderate circumstances, at charges within their means, giving

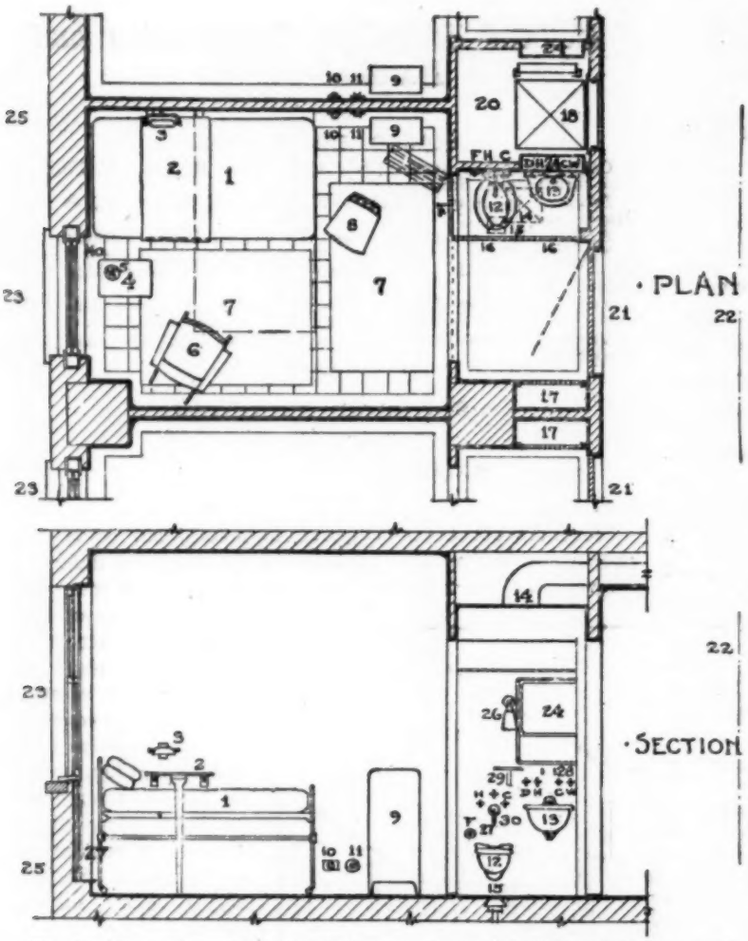

Fig. 2.—Plan and section of typical room: 1, standard bed and back rest; 2, adjustable table (removable); 3, reading lamp (removable); 4, nursing table; 5, telephone; 6, rocking chair; 7, small rugs; 8, straight-back chair; 9, radiator; 10, base plugs; 11, vacuum outlets; 12, water closet; 13, lavatory; 14, exhaust vent register; 15, floor drain; 16, three-leaf door; 17, lockers; 18, dumbwaiters; 19, door to dumbwaiter; 20, pipe space; 21, entrance to rooms; 22, center line of corridor; 23, windows; 24, steel cabinet for equipment; 25, exterior wall; 26, electric light and attachment; 27, sliding screen; 28, stupe ringer hooks; 29, shelf for equipment work; 30, swivel spout for bedpan and washing and shower attachment; *B*, hot water; *C*, cold water; *D*, drinking water; *W*, waste; *F*, flushing valve. These and the accompanying plans were made by Berlin, Swern and Randall, architects and engineers, 19 South La Salle Street, Chicago.

solarium if desired. Better examinations can be made and better histories taken than in a ward. They may be made at odd hours, which if done in a ward might disturb others. Hospital visiting rules can also be regulated to fit the individual patient and need not be allowed to fret the patient for the sake of observing a rule. It also allows the occupancy of *all the beds all of the time.*

In working out this plan, certain fundamental principles of construction and organization have been found to be imperative. These are the abandonment of wards and the substitution of small private rooms; the elimination of special duty rooms and general lavatories, and the substitution of a toilet and lavatory in each patient's room; the abandonment of floor diet kitchens and serving rooms, and the substitution of one large central kitchen and serving station; the abandonment of floor linen rooms, and the substitution of one central linen supply room; the abandonment of long corridors necessitating the carrying for long distances of food, linen, drugs and supplies, and the substitution of dumb waiters direct from the central supply rooms to each floor section; and the installation of pneumatic tubes to carry written requisitions from each floor to the central supply station, and also to carry any supplies that can enter the tube.

Probably the most trying question to every superintendent is the conservation of supplies. There are more provisions used than the capacity warrants, and there is an enormous shrinkage in the linens and household goods. Where do they go? Even the best supervision cannot control this, and numerous rules and regulations are hard to enforce. A trip through any large, progressive factory will show clearly that the materials and tools are not spread out at random, and that when the day's work is done every article is in its place. This is an application of efficient methods. Why not apply them to the hospital? In the new plan, the amount of provisions and equipment required will be reduced by the elimination of cooking and the necessary paraphernalia throughout the build-

them all the conveniences of the most exclusive institutions, and rendering the much needed educational work to the community, is the ideal to be attained; but to accomplish this ideal requires new methods and much thought.

Present hospitals are rated at a certain bed capacity, but it seldom happens that the maximum capacity is reached when there are wards. This is due to the constant variation in the percentages of the various cases handled, namely, the proportion of calls for men's or women's beds does not remain the same, and certain diseases seem to come in epidemics. This makes imperative some scheme for flexibility in the use of beds. The private room for each patient, with its complete utility equipment, not only provides comfort, but absolutely solves this problem. The question of contagion is eliminated, each room is complete in itself, needing no service which is common to any other; nor does a patient, developing some contagious disease at a late date, have to be moved at possibly the most critical period of his illness because of danger to others. Again, the room temperature can be kept at the degree best suited to each patient, or the room can be turned into a

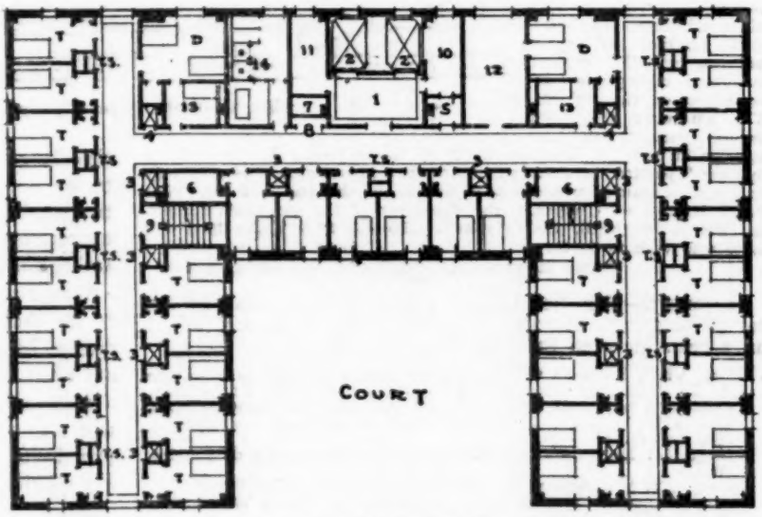

Fig. 3.—Typical floor plan of 160 bed hospital: 1, elevator lobby; 2, elevators; 3, service dumbwaiters; 4, specimen dumbwaiters; 5, linen and waste paper chute; 6 vent ducts; 7, pipe shaft; 8, medicine cabinet; 9, stairways; 10, service and janitor room; 11, toilet room; 12, dressing room; 13, bath and toilet rooms; 14, shower and tub room; *T*, typical room; *D*, double room; *T*, *S*, pneumatic tube station. According to this plan a five story building would have a capacity of 120 beds, a six story building 160, and a seven story building 200 beds.

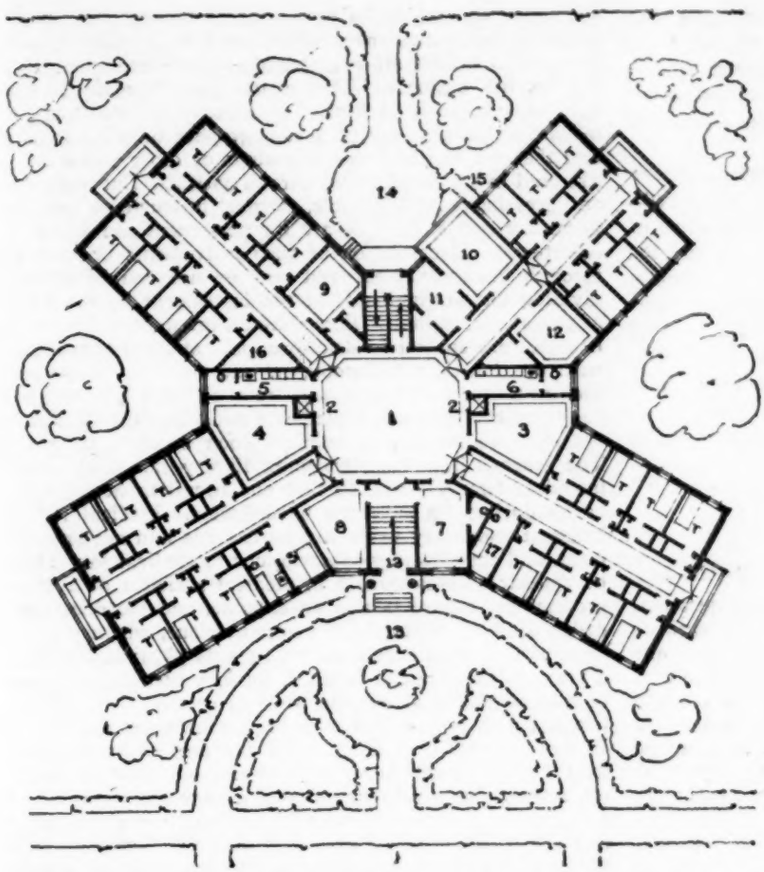

Fig. 4.—First floor plan of thirty bed hospital: 1, general rotunda, from the center of which a view of every door is secured; 2, service dumbwaiters from basement; 3, chart room, library and depository for histories; 4, laboratory and drug room; 5, men's toilet and locker room; 6, women's toilet and locker room; 7, general waiting room; 8, office of superintendent; 9, examining room and emergency operating room; 10, major operating room; 11, sterilizing and instrument room; 12, roentgen-ray room and dark room; 13, main entrance; 14, rear and ambulance entrance; 15, entrance to basement; 16, storage, chairs, carts, etc.; 17, special bath; *T*, typical room; *S*, special room with bath.

ing and the centralization of it in one general kitchen. The centralization of serving eliminates poor judgment on the part of floor nurses in setting up trays, and the use of unnecessary dishes, and provides a means of checking up more systematically those that are used. The cooking also is more economically done in bulk and is under the supervision of an expert dietetian. The elimination of linen and supply rooms all over the building, and the collecting together of all household supplies in one general storeroom, allow absolute supervision, as in a toolroom in a factory. In this way, carelessness and extravagance can be located. *Centralized control is the system which we should establish in efficient hospitals.*

If more people went to the hospital when they were sick, it would be possible to collect more data in regard to the various diseases. Hospital treatment in the past has been considered a luxury, and has been resorted to only when every other means of care failed. This should be reversed, and would be, if the charges for hospital services were within reach of the general public. The efficient city or community hospital, floor plans for which are submitted herewith, makes this possible. It will collect the cases of sickness in a community, tabulate them, and file their histories for future reference. It takes sickness out of the home and from the hands of inexperienced care and puts it under the proper supervision, giving it the advantage of trained nursing. Epidemics and the spreading of disease in homes can at once be controlled. Physicians will be able to give more of their time to their profession and less to traveling around from house to house. They can compare notes and gain from each other's experiences, to the advantage of the community as a whole.

Thousands of small hospitals are going to be erected. Efficiency and economy in the *medical* as well as the *material* service of the hospital should be our standard.

ILLUSTRATIVE PLANS

Figure 1 is an interior diagram perspective of the small typical room and shows the equipment in its place.

Figure 2 illustrates the small typical room in direct plan and section elevation. The intention of this drawing is to show the compactness of the facilities and the arrangement for furniture. This is the minimum size for the room advisable. This can be expanded and made more commodious as the building funds will allow, without interfering with the practicability of the idea.

Figure 3 is a suggested floor plan for a building of from 120 to 200 beds. The ground floor of such a building would be devoted to service, first floor to administration, physicians' offices, receiving departments and dispensary, and the top floor, operating, roentgen-ray and laboratory department. The use of the U-shaped plan allows the strategic placing of dumbwaiters around the central kitchen on the service floor. These dumbwaiters and elevators are the arteries of communication between all of the departments in the building.

Figure 4 is a suggested layout for a small community hospital of about thirty bed capacity.

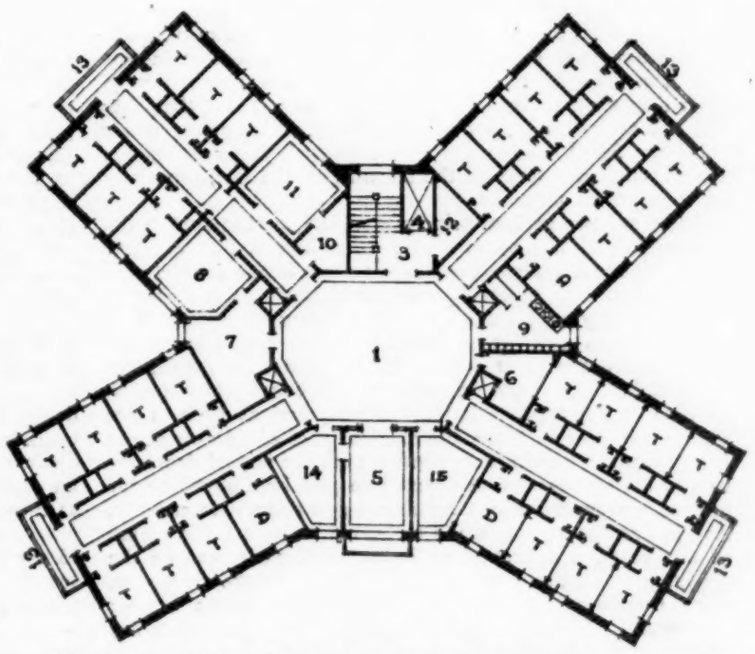

Fig. 5.—Second floor plan of eighty-five bed hospital: 1, general rotunda; 2, service dumbwaiters; 3, elevator and stair halls; 4, elevator; 5, sick babies' room; 6, milk laboratory; 7, work room; 8, nursery; 9, toilet room; 10, work room; 11, delivery room; 12, wheel chairs and carts; 13, solariums; *T*, typical room and utilities; *D*, double room and utilities; 14, bath room for babies; 15, dressing room for children.

using the individual room idea. All of the departments with which the patients come in contact are located on this floor, together with the general nursing. All of the service departments are collected together in the ground floor, where proper supervision can be given, with dumbwaiters as the arteries of communication between the two floors.

Figure 5 is a suggested layout similar to the one in Figure 4, for a community hospital of approximately eighty-five beds. Here again the departments with which the patients come in contact are collected together on the upper floors, and the ground floor is devoted entirely to service, with the dumbwaiters and elevators as arteries of communication. The operating suite, roentgen-ray department and laboratories of this particular scheme are located on the top floor, and administration on the first floor, together with a dispensary and physicians' offices if required.

Miscellany

PHYSICIANS' LIABILITY FOR INCOME TAX

The first of the year brings up again the annual question, "How much income tax must I pay for 1919?" In case of salaried officials, business men whose operating expenses are distinctly separate from their personal and family expenses, and those happy persons who derive a fixed and definite income from investments, this question is easily answered. The difficulty which has arisen in applying the income tax law to physicians is one that is inherent in the practice of medicine and for which the old habit of physicians of lumping their personal and professional expenses is responsible. It is, or was before the passage of the federal income tax law, difficult to determine what constitutes the actual income of physicians. More than any other class of professional men, they have, as a rule, confused gross and net income and have regarded the gross intake for the year as their professional income without regard to the cost of carrying on their business. Owing to the close relation between professional, personal and family habits, no clear dividing line has heretofore been drawn between personal and family expenses and the expenses of carrying on the practice. As a result, few physicians have kept sufficiently accurate records to enable them to separate these two classes of expenditures. In the first year or two of operation of the federal income tax law, many physicians paid a tax on a larger income than they were really liable for, owing to the fact that they did not understand what were legitimate exemptions under the law. Since the passage of the law, a number of rulings have been issued defining the meaning of the law, especially as it refers to physicians.

There are two general principles underlying the application of the federal income tax law: The first is that a man's income is the difference between his gross intake for the year and the total cost of carrying on his business. The second is that all money paid out for expenses directly connected with one's business and for articles the use of which is limited to the current year is deductible, but that money paid out for articles which will be used over a considerable period of time is not expense but investment, and as such is not deductible. For instance, the original cost of an automobile is an investment and not an expense; but the annual depreciation or loss of value of an automobile used by a physician for professional purposes is a legitimate and deductible expense. As the average automobile is estimated to have a life period of five years, a deduction of 20 per cent. each year on the original cost of the automobile is allowed. In the same way, office furniture and equipment is not an expense but an investment. Such equipment, however, deteriorates with use and age. A physician is, therefore, allowed to deduct the original cost of the equipment divided by the number of years for which it can be used.

Applying these principles to a physician's income, it is evident that his gross annual income is the total amount of his actual collections for professional services plus any additional income from any other sources. From this he is allowed to deduct all actual expenses necessary for carrying on his business. This would include office rent and maintenance, such as heat, light, cleaning, attendance, etc., office telephone, salary of a stenographer or office assistant, and the cost of any drugs, dressings or other materials that are used in the treatment or care of patients. But while drugs and dressings are deductible, surgical instruments and appliances are not, since they are for permanent use and are an investment. Depreciation of such instruments or equipment through breakage, wear and tear or use can be deducted, dividing the original cost of the instrument by the number of years of usefulness. Books are an investment, but medical libraries are subject to deterioration. Medical books do not wear out, but they do become old and obsolete. Some books, such as textbooks on anatomy, are good for a lifetime; while books on the practice of medicine and especially on some of the more recent special subjects soon become out of date. The average life of a physician's library can fairly be estimated at twenty years, so that one twentieth of the cost of books during the year can be deducted. Medical journals, being of temporary value, are an expense and not an investment, and consequently subscriptions to medical journals can be deducted. Membership in medical societies of a strictly professional nature is also an expense, and the dues can be deducted; but membership in organizations, whether medical or otherwise, of a social nature, such as physicians' clubs, is a personal expense and is not deductible. Regarding an automobile, as stated above, the original cost is an investment; but one fifth of the cost may be deducted for depreciation. If the automobile is used solely for professional purposes, then the upkeep and expense of operation, including gasoline, oil, tire repairs, chauffeur's wages, garage expenses, etc., are deductible. If the automobile is used partly for professional and partly for personal use, then both the depreciation and the expenses should be prorated. Regarding home expenses, if a physician maintains an office in a rented house, then a portion of his house rent can be deducted; but if a physician owns his own home, he is not allowed to make any deduction for rent for his office, whether he uses his home as a place of business or not. He would, of course, be allowed to charge off a proportional amount of the expense of heat, light, telephone, etc. Railway fare and cost of berth in attending medical society meetings of a strictly professional character may be deducted, but not hotel bills, meals or incidental expenses, the assumption being that these expenses would be incurred whether the physician attended the meeting or remained at home. If the physician uses horses instead of an automobile, the cost of maintenance may be deducted, provided the horses are used entirely for professional purposes; otherwise, the proportionate amount. Depreciation to the proper amount can also be charged off on horses, buggies or sleighs used for professional purposes. Physicians maintaining a laboratory can, of course, deduct the salary or wages of a laboratory assistant, the cost of chemicals, drugs and other materials used, and the depreciation on the laboratory equipment. Physicians maintaining roentgen-ray apparatus or laboratories can deduct salaries paid to operators and depreciation on the cost of equipment. Roentgen tubes and plates which are constantly breaking and have to be replaced would come under the same head as drugs, bandages, etc., and may be deducted. In the case of oculists furnishing glasses to patients, there should be two distinct charges recorded, one for professional services as an oculist and the other for glasses supplied to the patient as merchandise. Contributions to philanthropic, benevolent, religious and humane organizations may be deducted up to 15 per cent. of the total income, but not dues to clubs and social organizations.

The federal income tax law has been productive of two benefits to physicians. The first is that it has compelled physicians to keep more accurate and minute financial records. The second is that it has made it possible for physicians to determine their real income from professional work. Prior to the passage of this law, many physicians were accustomed to regard their total annual cash receipts as their income,

whereas their actual income was often only a third or a fourth of what they supposed it to be. While it has been a shock to many a man to find that instead of making ten thousand dollars a year, he was really clearing only from five to seven thousand, the result in the end will be highly salutary both to the individual and to the profession.

FEDERAL AID IN THE PROTECTION OF INFANCY AND MATERNITY

Every year about 16,000 mothers die in childbirth and nearly a quarter of a million babies die under one year of age. Most of these deaths are preventable. Among sixteen important countries, thirteen show a more favorable maternal death rate than the United States and six a more favorable infant mortality rate. Maternal mortality and infant mortality from maternal causes are not decreasing in the United States. About one half of all infant deaths occur within six weeks of birth and these early deaths are due chiefly to the condition of the mother and the lack of proper care and instruction for the mother during pregnancy and confinement. Maternal deaths and infant deaths from maternal causes are not decreasing because mothers do not yet have the skilled care and advice that they need. The Children's Bureau has secured detailed information about the mothers of 2,978 babies born within a short preceding period in eight rural areas representing six states. In these confinements, only five women received prenatal care approaching the minimum standard of "adequate" care outlined by the conference on child welfare standards at Washington in May, 1919, and in 80 per cent. of the cases, the mothers reported having had no prenatal care whatever.

BOTULISM FROM EATING CANNED OLIVES

Armstrong, Story and Scott (*Pub. Health Rep.* **34**:2877 [Dec. 19] 1919) report on the epidemic of botulism in Canton, Ohio—mentioned in THE JOURNAL, Nov. 15, 1919, p. 1538—following a club banquet, Aug. 23, 1919, at which about 200 people were present. The cases were confined to the chef, waiters and diners of one table at which ripe olives, nuts and candy had been substituted for regular items of the menu. By a process of exclusion, graphically portrayed in a tabulation, the attacks were attributed to the ripe olives. Seventeen persons ate or tasted of the olives; fourteen became definitely ill, seven cases ending fatally; three showed no definite symptoms. None were ill who did not partake of the olives. Those who ate the most olives died first, while among those who recovered, the severity of illness bore a close relation to the numbers eaten; three who developed no symptoms ate the least of all. Two diners, who took a relatively large amount and recovered, had partaken freely of alcohol during the evening. The olives were packed in a sealed glass jar, but the vacuum had been accidentally destroyed. They were placed in three table dishes; the contents of two dishes were washed under the tap and drained, the third dish was unwashed. This factor, in the opinion of the authors, may explain the death of one person who ate half an olive, while another recovered after eating two olives. The symptoms were very similar in all cases, varying mainly in severity: headache, diplopia, dimness of vision, and slight vertigo were the most common phenomena. The authors believe that certain diagnostic pitfalls are present in all cases. Botulism may be mistaken for poisoning by mushrooms, wood and ethyl alcohols, cerebral hemorrhage or syphilis, and hysteria; only the occurrence of attacks in others will make the matter clear.

A thorough chemical and biologic investigation of the toxin was made. Chemical examination for definite poisons yielded negative results. Subcutaneous injection of 0.5 c.c. of an emulsion of the suspected fruit in sterile saline solution produced symptoms; 1 c.c. proved lethal to guinea-pigs weighing from 250 to 300 gm.; while from 0.001 c.c. to 1 c.c. of the brine caused death in from eighteen hours to four days. Ingestion of small quantities of brine and of the olives also proved fatal. The brine, after passing through a Berkefeld filter, although culturally sterile, proved highly poisonous on subcutaneous injection; heating at 80 C. for thirty minutes rendered the filtrate harmless.

Anaerobic culture at 37 C. in beef infusion glucose agar yielded a growth of a gas producing, agar fragmenting bacillus, gram positive, motile, coarse, sporogenic, and staining well but irregularly with ordinary dyes. Cultural characteristics and toxin formation led to its identification as a strain of *Bacillus botulinus*. The organism grew well in the brine of unspoiled olives of the same brand, and its spores resisted 100 C. for thirty minutes. Potent toxins developed, a sterile filtrate from a nine-day culture proving lethal in doses of 0.00005 c.c. intraperitoneally. Subcutaneous or intraperitoneal injection of various doses of toxin diluted to 1 c.c. with sterile saline, mixed with 0.5 c.c. of 95 per cent. alcohol, protected guinea-pigs against twenty times the lethal dose. Tests for agglutinins and antitoxins were negative.

Medicolegal

Value After Death of Good Will of Business of Roentgenologist—of Physician

(*In re Caldwell's Estate* (*N. Y.*), *176 N. Y. Supp. 425*)

The Surrogate's Court of New York County holds that, where a physician, who had specialized in roentgenology or the taking of roentgenograms as an aid to physicians, bequeathed the good will of his business, together with the apparatus used in connection therewith, to his two assistants, one of whom was a physician who leased the office that had been occupied by the testator, but removed the latter's name from the door and substituted his own, the transfer tax appraiser erred in valuing the good will at $38,874.12, and that his report should be remitted to him for the purpose of excluding the good will as an element of value. The court says that the question of whether the good will of the practice and business of a man who has attained eminence in his profession has, on his death, a value that is capable of ascertainment or computation, does not seem to have been decided in the reported cases. The extensive and lucrative business transacted by the decedent was the result of his reputation for great skill in taking roentgenograms, and as this skill and knowledge died with him it could not constitute an element of good will that would survive him. The death of a man who had attained such prominence and reputation as a roentgenologist must have received such publicity as would bring it to the attention of practically all the members of the medical profession who knew him by reputation or who would ordinarily have sent patients to him. Therefore, after his death those physicians would not send any more patients to the office theretofore conducted by him; and if the office passed into the possession of another physician or roentgenologist, it could scarcely be said that its former occupancy by the decedent made it more valuable to his successor. The skill and knowledge which the physician who had been an assistant to the decedent acquired during his association with the decedent, and which induced physicians to send their patients to him, were entirely personal to him, and were not transferred to him by the decedent as part of the good will of the business. The reputation which the decedent had acquired was personal to him, and it was not due to the place where he maintained his office or to any trade mark or trade name.

It has been held that a physician may sell the good will of his business and that the courts will recognize the right of the purchaser to such good will. But there seems to be a distinction between the business sold by a physician during his lifetime and the value of that business after death. If sold by the physician during his lifetime, he could introduce the purchaser to his patients and friends as a prudent and reliable physician, and such introduction would immediately give the purchaser a reputation and standing which otherwise might require years to establish. It seems to the court that such introduction and recommendation to patients con-

stitute the real consideration for the money paid to a retiring professional man by one who wishes to succeed him. But after a man who has acquired a reputation for great skill or knowledge is dead, persons who would go to his office for the purpose of consulting him and availing themselves of his superior skill would not go there merely because the office was still open and occupied by another person, who had no reputation for superior knowledge or skill.

It seems to the court that the criterion by which it may be determined whether the business of the decedent had a good will capable of being transferred by his will is: If an inconspicuous and unknown physician should take the office which had been occupied by the decedent at the time of his death, and put his own name on the door, would the clients of the decedent, or a considerable number of them, continue to send their patients to that office? In the court's opinion, it is extremely improbable that such a person would receive any patients from the physicians who patronized the decedent because of his exceptional skill and knowledge.

Liability of Operating Surgeons to Pay Assistants

(Semple v. Ringo (N. D.), 172 N. W. R. 817)

The Supreme Court of North Dakota, in reversing a judgment rendered on a verdict directed in favor of the defendant, and ordering a new trial, holds that in surgery the proper administration of an anesthetic is an essential part of the operation, for which a surgeon is commonly paid a good round fee, which includes the minor fee of an assistant. When he employs an assistant, the presumption is that he agrees to pay him, unless the contrary appears from express words or conditions.

In the opinion in the case, prepared by Justice Robinson, it is said that the complaint averred that on several occasions, at the special request of the defendant, the plaintiff administered anesthetics to patients of the defendant on whom the latter performed surgical operations; that the plaintiff's services were reasonably worth $25, which the defendant promised to pay. The defendant admitted that at his request the plaintiff performed such services, and that these were reasonably worth $25, but set up the defense that in requesting the services he acted merely as the agent of his patients, and did not assume any personal obligation, and that in such cases it is customary for a physician to administer anesthetics and to look for his pay to the patients, and not to the surgeon calling him. In this case the defendant had a hospital, and did quite an extensive operating business. On the several occasions, without disclosing the names of his patients or anything concerning them, he requested and accepted the services of the plaintiff in what are known as minor and major surgical operations. In such a case the principal surgeon commonly gets a good liberal fee for doing everything necessary for a successful operation. In modern surgery the proper administration of an anesthetic is a very essential part of the operation. It may also be necessary to obtain from a druggist antiseptic gauze or cotton and other small things. All such services and necessaries are properly chargeable to the surgeon when he orders them without giving the name of his patient as the person to whom the charge should be made. In this case it appeared that, at the request of the defendant, the plaintiff went and administered anesthetics, not knowing anything of the patients, not even their names, and not looking to them for payment. It also appeared from abundant evidence that the custom is for a surgeon to pay the small fee of an assistant physician whom he clearly requests to administer an anesthetic. Clearly both the presumption of law and the weight of the testimony was in favor of the plaintiff. The case should have been submitted to the jury. Justice Birdzell concurs; Justices Bronson and Grace concur in the result; and Chief Justice Christianson dissents.

Chief Justice Christianson says, in his dissenting opinion, that the plaintiff testified that in the first case in which he helped the defendant they were in the Elks' Home and the defendant asked him if he would care to go out for a drive with him to see a case of gunshot wound of the knee; it was another physician's case, and that physician wanted to assist the defendant in the operation, and they had the plaintiff give the anesthetic. In the next case the defendant telephoned to the plaintiff's office and asked him if he could go up and give an anesthetic. The third case was one wherein the defendant called the plaintiff to give an anesthetic for a patient on whom he was operating for appendicitis. The next case was one in which the defendant asked him if he would come over and see a case with him. It was undisputed that the defendant at no time expressly promised to pay the plaintiff for the services which he rendered, and the sole question was whether, on the facts stated, there was an implied promise on the part of the defendant to pay for such services. The plaintiff knew that the defendant had been engaged as attending physician by certain patients. The defendant summoned the plaintiff to assist in treating such patients. The plaintiff met them. They received the benefit of his services. They were all persons of mature age, and in possession of their faculties. It would seem that under these circumstances the law did not imply any promise on the part of the defendant to pay the plaintiff for the services which he performed. In order to be binding, a custom must be certain, uniform and general, which the plaintiff's evidence did not show of the alleged custom for surgeons to pay assistant physicians.

Release Not Bar to Action for Roentgen-Ray Burns

(Wheat et al. v. Carter (N. H.), 106 Atl. R. 602)

The Supreme Court of New Hampshire, in overruling exceptions to a judgment that dismissed the plaintiff's petition for an injunction to prevent the defendant from prosecuting an action which he had brought against them because they had burned him with a roentgen-ray machine after he had employed them to treat his hand which had been injured, holds that a release which he gave to his employers, in whose service he was injured, was not necessarily a bar to his right of action against the plaintiffs. The court says that it is settled in New Hampshire that the release of one joint tort-feasor or wrong-doer is a bar to a suit against the others; and that is also true as to the effect of a release when the releasor's loss is caused by the concurrent misconduct of the one released and others. The reason that a settlement with one of several tort-feasors or wrong-doers is ever a bar to a suit against the others is that the injured party has been fully compensated for the loss which he is seeking to recover in the second suit. Since this is so, the question in this case was whether the defendant had already been compensated for the loss he sustained as the result of the plaintiffs' use of the roentgen-ray machine, not, as the plaintiffs contended, whether his employers might have been liable for that loss. In other words, the test to determine whether the release was a bar to his suit against the plaintiffs was to inquire as to the extent of the claim he made at the time he settled with his employers. Was he claiming to recover all the loss he sustained as the result of the original injury to his hand, or only the loss which resulted immediately from that injury? However the fact may be in other states, in New Hampshire the issue raised by that inquiry was an issue of fact to be determined, like all such issues, by the weight of competent evidence. The question, therefore, which was raised by the plaintiff's exception to the sufficiency of the evidence, was whether it would warrant a finding that the defendant had not been compensated for the loss he was seeking to recover from the plaintiffs. It was permissible, when considering that issue, to consider the defendant's testimony, even though it might contradict the terms of the release. In short, notwithstanding his employers might have been liable for all the loss the defendant sustained, and the release included all claims he might have against them, it was permissible for him in this proceeding to show just what he was claiming when he settled with them, for these plaintiffs were not parties to the release. In other words, the release in and of itself was not a bar to the defendant's suit against the plaintiffs; but, if he had already been compensated by his employers for the loss he was seeking to recover in that suit, that fact was a bar to the suit.

Society Proceedings

WESTERN SURGICAL ASSOCIATION

Twenty-Ninth Annual Meeting, held in Kansas City, Mo., Dec. 5-6, 1919

The President, DR. ROLAND HILL, St. Louis, in the Chair

Artificial Impaction of Femur in Aged

DR. CHARLES D. LOCKWOOD, Pasadena, Calif.: Artificial impaction affords immediate bony contact and insures an adequate blood supply for union. With the patient under anesthesia, the limb is placed in extreme abduction and strong traction, with slight internal rotation. The great trochanter, protected by two layers of felt, is struck three or four swinging blows with a large wooden mallet. A light plaster-of-Paris cast is applied extending from below the knee to the waist line and including the sound limb to the knee. The anesthesia lasts only five or ten minutes, and there is no shock to the patient. The patient is placed on a fracture bed equipped with a special frame and elevating device, enabling the nurse to raise the patient with ease, to bathe, attend to the bowels, and to change the bedding. The cast may be removed as early as the eighth week; but if well borne, it should be left on for twelve weeks. By the end of the fourth month the patient is up and about on crutches, and is bearing some weight on the broken leg. I have treated three patients more than 70 years of age by this method, and all are walking and perfectly well.

Tuberculosis of Joints; Rollier's Heliotherapy

DR. GUSTAV SCHWYZER, Minneapolis: It is my practice to operate in every case of tuberculous joint whenever it is feasible, with Esmarch's constrictor applied. Only with this bloodless procedure is it possible to differentiate between healthy and diseased tissues. In operating, I generally follow the method of Kocher. It would be taking another great step ahead in the treatment of surgical tuberculosis if we could establish numerous institutions in America where Rollier's treatment could be used intelligently; but there will always be persons who cannot spend from one year to three years in such institutions, waiting for a definite cure. For these patients, surgery may be preferable.

A Mixture of Ethyl Chlorid, Chloroform and Ether for General Anesthesia: An Experience in War Surgery

DR. E. P. QUAIN, Bismarck, N. D.: In France this mixture was considered the most suitable anesthetic for most minor injuries as well as for wounds of moderate severity. We employed it as the anesthetic of choice for most operations that could be finished within fifteen or twenty minutes. In many instances, therefore, the speed of the operating team was the criterion as to whether the choice would be the ethyl chlorid mixture or simply ether. We used ethyl chlorid, 5 c.c.; chloroform, 1 c.c., and ether, 24 c.c. This mixture is poured on a piece of flannel, which is spread out smoothly over a similar piece of flannel laid on the patient's face. A mask is placed over the face so that the margin of the mask is held firmly around the face, under the chin, in front of the ears and over the top of the head. The mask should be as air-tight as possible. There can be no reason why this mixture should not be used in emergency surgery in civil practice when conditions and necessities correspond more or less to those of the wounded soldiers.

Operative Technic in Spina Bifida

This paper, by Dr. Joseph Rilus Eastman, Indianapolis, will be published in full in THE JOURNAL.

Rhinophyma

DR. M. G. SEELIG, St. Louis: The treatment of the disease is exclusively operative. The most satisfactory operative procedure consists in shaving off the redundant tissue until the nose is brought back to what is believed to have been its original form. In this shaving process, two things should be borne in mind: 1. One should not shave too deeply. 2. A thin rim of epithelium should be preserved around the nares. If the shaving is carried too deeply, all sebaceous gland rests are removed, and there are left no niduses of epithelium from which, as brood centers, epithelization may spread. This delays healing, and even if the nose be grafted, the resultant skin has a harsh, white, dry appearance so striking as always to command attention and cause comment. Furthermore, deep shaving may injure the nasal cartilages and set up a stubborn perichondritis. If a thin ring of intact skin is not left around the nares, serious disfigurement may result from the contractions incident to cicatrization. Hemorrhage, which is usually very free, is checked with comparative ease by simple gauze pressure, and the patient is sent to bed with a large gauze pad well smeared with petrolatum over the nose. Next day this pad is removed, and the denuded area strapped with imbricated strips of sterile zinc oxid adhesive plaster. This dressing is changed daily. Skin grafting is not necessary.

Diaphragmatic Hernia

DR. T. F. RIGGS, Pierre, S. D.: According to the authorities, the great majority of diaphragmatic hernias occur to the left of the midline. My case was one of true traumatic hernia on the right of the median line.

Jaundice and Its Surgical Significance

DR. CHARLES H. MAYO, Rochester, Minn.: In approximately 50 per cent. of cases, the jaundice is caused by obstruction of the common duct by gallstones; in 20 per cent. it is caused by absorption of bile in the liver, or infective or catarrhal jaundice without duct obstruction. From 5 to 8 per cent. of cases of jaundice are caused by serious infection of the gallbladder, possibly gangrene with or without stones. Jaundice from cancer represents 15 per cent. of the cases seen; one half of these cases are caused by cancer of the liver, and the other half, by cancer of the pancreas or the gallbladder and ducts. Jaundice is a late symptom of gallstones in the majority of cases, the result of neglect to recognize the condition or to advise operation in the preventive period. The mortality following cholecystectomy for cholecystitis, with or without stones, is low: only 1.8 per cent. in 2,460 operations performed during a period of three years. There were 337 cases in which both cholecystectomy and choledochotomy were done, with a mortality of 3.2 per cent. In a very serious group of thirty-six cases of obstruction and malignancy, cholecystostomy and choledochotomy were done, with a mortality of 16.6 per cent. Choledochotomy alone was done in a somewhat similar group of forty-seven cases, with a mortality of 15 per cent. If all the choledochotomies are grouped together, however, the mortality in 420 cases is 5.7 per cent., too high a mortality for simple cases of stone and obstruction, and too low for the late and complicated cases, including the cancer cases. Stones were found in the common duct in 274 of the 420 cases.

Congenital Anomaly of Duodenum and Its Surgical Significance

DR. LEONARD FREEMAN, Denver: I have operated in six cases of duodenal obstruction. In none was the diagnosis made previous to the operation. Partial occlusion of the duodenum at the duodenojejunal angle, simulating pyloric obstruction, occasionally occurs from the persistence of a condition normally existing in fetal life. The duodenum, instead of appearing in the abdominal cavity from beneath the transverse megacolon to the left of the spine, emerges to the right, its transverse and ascending portions possessing a peritoneal covering and mesentery of their own, similar to the rest of the small intestine, instead of being fixed in fibrous tissue, as is normally the case. At the duodenojejunal angle, however, the bowel is hung up to the root of the colonic mesentery by a firm adhesion, the kink thus produced being intensified by the downward pull of the free duodenal loop. This kink is deeply situated, and in freeing it care must be taken not to injure the bowel, the inferior mesenteric veins or the left colic artery. A considerable denudation of the intestine may be necessary, which should be covered either by reuniting the peritoneum or by means of a free omental graft.

Surgical Treatment of Empyema

DR. W. W. GRANT, Denver: In the fall of 1917 and the spring of 1918, I operated in twenty-eight cases of empyema,

with a mortality of six cases. In the winter of 1918 and early in 1919, I operated in three cases with no mortality. In all cases, twenty minutes before the operation, one ounce of whisky was administered, and a hypodermic injection of ⅙ grain of morphin, 1/200 grain of atropin and ½ grain of spartein. From 1 to 1½ inches of rib were resected. On the right side, the eighth rib, and on the left side, the ninth or tenth rib, usually in the posterior axillary line, were selected, the aim being to secure the most dependent drainage. A rubber drainage tube, sometimes double, was immediately introduced, and the tissues were sutured snugly around it, the tube was fixed primarily with a suture and a safety pin, and the long outer tube was dropped into a bottle of water beneath the bed as in certain cases of gallbladder drainage. The quantity of pus evacuated varied from 2 to 4 quarts. The discharge diminished rapidly, and on the second or third day the patients were taken to the dressing room twice daily and the cavity irrigated with a 5 per cent. sodium bicarbonate solution, boric acid being added, followed immediately by a solution of iodin. The shortest period in which any patient returned to duty after operation was seventeen days, while the convalescent period in most instances was from two to three months.

Malignant and Benign Tumors of Breast

DR. BYRON B. DAVIS, Omaha: My study of 210 private cases is encouraging rather than discouraging. Operations for cancer save lives. The very early operation, so early that the microscope is necessary to make the diagnosis, is bound to produce better results than the operation done after the disease is easily diagnosed. The radical operation should be directed in such a way as to remove as thoroughly as possible the highways along which the disease is disseminated. The campaign of education of the public with reference to the signs of early cancer and its curability, when operation is performed early, should be continued and kept up unceasingly. The fact should be appreciated that every woman operated on for cancer of the breast, who remains free of the disease, is more powerful propaganda in the community in which she lives than all the tracts that could be written.

Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below.

Archives of Internal Medicine, Chicago

Dec. 15, 1919, **24**, No. 6

*Botulism; Resistance of Spores of B. Botulinus to Sterilizing Agencies Commonly Employed in Canning Fruits and Vegetables. E. C. Dickton, G. S. Burke and E. S. Ward, San Francisco.—p. 581.

*Pneumococcus Carriers. J. Sailer, Philadelphia; M. W. Hall, U. S. Army; R. L. Wilson, Jeannette, Pa., and C. McCoy, U. S. Army. —p. 600.

Antipyretics. I. The Benedict Respiration Chamber at the New Haven Hospital. H. G. Barbour, New Haven.—p. 610.

Antipyretics. II. Acetylsalicylic Acid and Heat Regulation in Normal Individuals. H. G. Barbour and M. M. Devenis, New Haven. —p. 617.

*Antipyretics. III. Acetylsalicylic Acid and Heat Regulation in Fever Cases. H. G. Barbour, New Haven.—p. 624.

*Mental Disorders Following Influenza. A. Gordon, Philadelphia. —p. 633.

*Electrocardiogram and Ventricular Preponderance. E. P. Carter and C. H. Greene, Baltimore.—p. 638.

*Basal Metabolism in Exophthalmic Goiter. J. H. Means and J. C. Aub, Boston.—p. 645.

More Common Gases; Their Effect on Respiratory Tract in Two Thousand Cases. R. S. Berghoff, Chicago.—p. 678.

Botulism.—The experiments reported on by Dickson and his associates were undertaken to determine the thermal death point of *B. botulinus* and its spores under various conditions. They found that the spores of *B. botulinus*, when mixed with animal or vegetable protein, are much more resistant to heat than has been believed. The acidification of the culture medium by the addition of 5 per cent. lemon juice does not prevent the growth of *B. botulinus* or the formation of its toxin, but the thermal death point of spores of *B. botulinus* is markedly lowered when they are heated in an acid medium of similar concentration. The addition of cane sugar to beef broth in concentration up to 64 per cent. does not prevent the growth of *B. botulinus* or the formation of its toxin, although it does inhibit both to a certain extent. Certain fruits which have been canned in sugar form suitable mediums for the growth of *B. botulinus* and the development of its toxin. Peaches, apricots and pears were tested. Certain of the methods of canning are inefficient if the raw material happens to be contaminated with spores of *B. botulinus*. This is true of commercial canners' processes as well as of the home canning processes.

Pneumococcus Carriers.—The results of the disinfection experiments made by Sailer and others in their study of pneumococcus carriers may be summarized as follows: Dichloramin-T, dissolved in eucalyptol gave good results; used in solution in chlorcosane the results were far less satisfactory. Chlorin gas is not efficient and caused discomfort and is possibly dangerous even in such concentration as was used. Phenol showed good results. The solution in oil is more efficacious than that in glycerin. The use of instillations rather than sprays is perhaps preferable on account of reduced danger of ear infection. Iodin in oil gave good results. It caused no discomfort. Quinin sulphate proved of no value. An accidental observation suggests that it may be valuable in another way. The experiment was under way when the spring epidemic of influenza visited the camp. The carriers of other groups were attacked by the disease in the same proportion as the men of the rest of the camp. No cases of the disease developed in the group being sprayed with the quinin. The prompt subsidence of the epidemic prevented further observations. Chloramin-T is apparently of little value. Carriers were detected by means of smears from the nasopharynx spread on blood agar plates and transplantation of the green pneumococcus colonies in the blood broth medium of Avery. The application of this method to 700 men showed the presence of 16 per cent. of pneumococcus carriers. The authors believe that the contacts of cases of pneumonia should be subjected to culture in the same way as is now done for contacts of meningitis; that when such contacts are shown to be carriers of the same type of pneumococcus as that infecting the patient, vigorous antiseptic treatment should be instituted, combined with such measures of isolation as conditions permit. In the presence of epidemics of pneumonia or of diseases fatally complicated thereby, such as influenza or measles, it is practical to treat large numbers of men by these methods.

Antipyretic Value of Acetylsalicylic Acid.—Acetylsalicylic acid, in 1 gm. doses, which has no such action in normal persons, Barbour found exhibits a marked antipyretic effect in febrile, temporarily afebrile and convalescent subjects. The antipyretic effect is due essentially to the heat elimination, which is associated with marked perspiration and subjective warmth. Sensitivity of febrile, temporarily afebrile and convalescent subjects to antipyretics is not explained. These drugs do not "stimulate" a "depressed" heat regulating mechanism, nor is sensitivity due to a lack of readily combustible material (glucose); but the respiratory quotient of antipyretic sensitive individuals appears to be increased by doses of acetylsalicylic acid which do not affect the quotient of normal persons.

Mental Disorders Following Influenza.—Gordon's study is based on a series of sixty-two cases, all seen at the end of the febrile period during the phase of asthenia which ordinarily follows infectious diseases. The majority of the cases (forty-four) presented the well known confusional type of psychosis, more or less pronounced. The mental manifestations were particularly marked in persons whose previous medical histories either suggested various episodic phenomena of neuropathic character or contained accounts of actual psychotic disorders. This particular group differed greatly from the groups of cases without previous nervous or mental disorders. Each group is described in detail.

Value of Electrocardiogram.—It is emphasized by Carter and Greene that the electrocardiogram is the only satisfactory clinical method capable of estimating the relative pre-

ponderance of the two ventricles. Combined with the teleroentgenogram as a guide to gross hypertrophy of the heart, it should furnish the clinician with an increased insight into the question of the mechanics of cardiac response in cases of hypertrophy.

Basal Metabolism in Goiter.—From the work done by Means and Aub it would appear that the safest program for the treatment of exophthalmic goiter, as a whole, is the routine irradiation of thyroid and thymus glands in all cases, with surgery held in reserve for patients who do not then do well. Surgery is contraindicated with patients whose metabolism is rising in spite of complete rest in bed, and also with patients of the type with moderate tachycardia and great metabolism increase, except when they have previously had their thyroid and thymus glands treated by the roentgen ray. The risk of operation is greater, and the need for preoperative roentgen ray treatment is greater in cases with a very high metabolism and moderate tachycardia than in those with an extreme tachycardia and moderate metabolism elevation. In the management of exophthalmic goiter, periodic determination of the basal matabolism should be quite as much a routine as is the examination of the urine for sugar in diabetes mellitus. In borderline cases the basal metabolism furnishes very valuable aid in differential diagnosis.

Archives of Neurology and Psychiatry, Chicago

Dec. 1919, **2**, No. 6

*Acute Ascending Paralysis Among Troops. L. Casamajor, New York. p. 605.
*Infective Neuronitis. F. Kennedy, New York.—p. 621.
*Hereditary Occurrence of Hypothyroidism with Dystrophies of Nails and Hair. A. M. Barrett, Ann Arbor.—p. 628.
Case of Congenital Facial Paralysis. F. R. Fry and M. Kasak, St. Louis.—p. 638.
Problems in Diagnosis and Treatment of Injuries to Peripheral Nerves. C. A. Elsberg, New York, and A. H. Woods, Philadelphia. —p. 645.
Overlap of So-Called Protopathic Sensibility as Seen in Peripheral Nerve Lesions. L. J. Pollock, Chicago.—p. 667.

Acute Ascending Paralysis.—The material for this paper consisted of the spinal cords from two cases. Only one patient was seen by Casamajor before death. This man, a soldier, had had a fever for about twenty-four hours, five days before the onset of the paralysis. He suddenly became weak in the knees while working with a pick. He went to his dugout and lay down, and after a few hours was unable to move his legs. The next morning he could not move either legs or arms. He was not incontinent of feces or urine. His arms were completely paralyzed with the exception of the fingers of the right hand, which he could move voluntarily to a slight extent. His pulse was rapid and he had a temperature of 101 F. His breathing was labored and he had a beginning edema of the lungs. The paralysis was of an extreme flaccid type with complete abolition of all reflexes. No sensory loss could be determined anywhere. He died less than three days after the onset of the paralysis. The pathologic findings were practically identical in both cases. In both cases the histologic findings were approximately the same: 1. Hyperemia, hemorrhage edema, and fibrous swelling in the arachnoid; thickening of the pia. 2. No changes in blood vessel walls; no round cell infiltration. 3. Increase of the cellular neuroglia in the central gray, around the root fibers and in the posterior root ganglions. 4. Evidence of beginning degeneration of both a secondary and primary character in the anterior horn cells and some tract cells. Hyperemia of the central gray. 5. Marked degeneration of primary and secondary character of the nerve fibers where they lie in the arachnoid, always most marked in the motor fibers. In the second case there was also a beginning degeneration in the posterior nerve roots just outside the dura and marked degeneration of the posterior root ganglion cells with neuronophagy.

Infective Neuronitis.—Kennedy cites four cases revealing definite clinical variants from the well known syndrome of polyneuritis, which, when considered along with the widespread changes in the posterior ganglions, spinal roots, ventral cornual cells and Betz cells of the cortex, would seem to make it fitting to remove this disease from the neuritides proper, and to designate it by a title more descriptive of the clinical and pathologic picture produced. This condition was described fully by Bradford, Bashford and Wilson in the *Quarterly Journal of Medicine* **12**:88, 104 (Oct., 1918, Jan., 1919) and abstracted in THE JOURNAL, March 22, 1919, p. 899.

Hereditary Hypothyroidism.—Among sixty-one members of a family belonging to six generations, investigated by Barrett both hair and nails were affected in fourteen instances. The nail defect seemed to be about the same in all, but there was much variation in the degrees of loss of head hair. In the greater number there was an extreme scantiness as to the amount of hair. In no instance was there a total loss of all hair of the head, the most extreme cases showing a fine lanugo-like covering of the scalp. Aside from this particular abnormality, there were other features that showed that in this family group there were conditions active in the production of a variety of disorders that are of much interest to neuropsychiatry. This is the high frequency of feeblemindedness and neurologic disorders of a degenerate type among the family. The members of the third generation who had dystrophies of nails and hair, and all of their descendants, numbered twenty-nine persons. Of these, twenty-two were definitely abnormal Twelve of the latter had the characteristic family dystrophy, and ten others, who lacked this, showed other constitutional and nervous disorders. These included one case of epilepsy, one of hysteria, one of severe tic, four instances of feeblemindedness, one of nocturnal enuresis and four died at an early age from marasmus. Even those who had the nail and hair dystrophy had other abnormalities. One of these was an epileptic; one had cancer; four were feebleminded, one had nocturnal enuresis The well known association of abnormalities of hair and of nails in hypothyroidism, and two fairly well defined cases of juvenile myxedema which led to this study, and the reaction of one patient to thyroid feeding, Barrett says, seems to warrant the conclusion that the fundamental disorder in this family was of the thyroid gland.

Archives of Ophthalmology, New York

November, 1919, **48**, No. 6

Nonoperable Tumor of Orbit and Brow Treated Successfully with Radium. G. H. Bell and S. Tousey, New York.—p. 531.
*Cases of Lethargic Encephalitis. H. Woods, Baltimore.—p. 536.
Ocular Complications Due to Typhoid Inoculations. F. P. Calhoun, Atlanta.—p. 553.
Subretinal Exudate Simulating Sarcoma of Choroid with Anatomic Examination. A. Knapp, New York.—p. 559.
Two Cases of Epithelioma of Eyeball and Lids. Operation. No Return After Eleven and Six Years. D. Roy Atlanta.—p. 561.
Positive Focal Tuberculin Reaction in Spindle Cell Sarcoma Which Had Perforated Sclera. J. W. Charles, St. Louis.—p. 568.
Positive Posterior Fibrovascular Sheath of Lens. Report of Two Cases. F. Lane, Chicago.—p. 572.
Antidiphtheritic Serum in Severe Ocular Infections with Special Reference to Hypopyon Keratitis. B. W. Key, New York.—p. 581.

Eye Findings in Lethargic Encephalitis.—Of seven cases reported by Woods two gave history of antecedent influenza, one, a doubtful history, and four, no history of this disease. In only one case was there optic neuritis, and this was of low grade. In three cases there was serious impairment of accommodation, and the pupils were dilated, sluggish and at times inactive. In another case, the patient's age prevented accommodation tests, but the pupils presented similar conditions. These four patients presented other defects; involvement of other branches of the third nerve; abducens and facial paralysis. These cases confirm the observation that the return to normal of the intrinsic muscles is slower than that of the extrinsic muscles. Of special interest were the nystagmoid movements, which occurred in five of these seven cases. In two cases they were the only signs pointing to involvement of the eye muscles.

Boston Medical and Surgical Journal

Dec. 18, 1919, **181**, No. 25

Public Health. A. Worcester, Waltham, Mass.—p. 703.
*Tumors of Anterior Surface of Sacrum. F. B. Lund, Boston.—p. 704.

Tumors of Sacrum.—Lund reports two cases, one of chordoma of the sacrum and one of sacrococcygeal dermoid.

California State Journal of Medicine, San Francisco

December, 1919, **17**, No. 12

Encephalitis Lethargica in San Francisco. P. K. Brown, San Francisco.—p. 427.
*Intestinal Flagellates: A Plea for Their Pathogenicity. J. V. Barrow, Los Angeles.—p. 429.
Plea for Earlier Recognition of Subacute Infantile Scurvy. L. Porter, Los Angeles.—p. 431.
*Case of Tetanus Successfully Treated by Antitoxin. H. P. Jacobson, Los Angeles.—p. 434.

Intestinal Flagellates: Plea for Their Pathogenicity.—Among the twenty-one cases cited by Barrow there were three cases of intestinal perforation. From one of these, *Trichomonas intestinalis* was recovered, both in the feces and in the peritoneal drainage. He points out that intestinal flagellosis is relatively common in California. Their pathogenicity is not wholly manifested by dysentery, but rather more often by other signs of an absorptive toxemia. No treatment thus far recommended is wholly successful. Calomel, followed by a saline laxative, gives the best temporary relief, but in about ten days' time, a careful search will reveal the parasites again. It is, therefore, necessary to repeat treatment many times. Thymol in large doses has considerable value. Emetin and ipecac exert a helpful influence in most cases. Oil of chenopodium and turpentine are very helpful; enemas of kerosene, ichthyol, or allied substances, have a marked beneficial effect, while those of methylene blue and sodium bicarbonate have about the same relative value as tap water.

Case of Tetanus Successfully Treated by Antitoxin.—During six days of treatment, Jacobson administered 117,000 units of antitoxin; 22,000 units were given intramuscularly; 70,000 units were given intravenously and 25,000 units were given intraspinally. Jacobson favors the administration of antitoxin jointly or alternately intraspinally, intravenously, intramuscularly and locally as being the most rational and promising method of treating tetanus.

Canadian Journal of Mental Hygiene, Toronto

October, 1919, **1**, No. 3

The Mysterious Stranger (Henry More Smith). C. K. Clarke, Toronto.—p. 199.
The Parents' Plea. H. MacMurchy, Toronto.—p. 211.
Oriental Immigration. W. G. Smith, Toronto.—p. 213.
Summer School for Auxiliary Class Teachers at Toronto. B. Kellaway, Toronto.—p. 223.
One Phase of Foreign Invasion of Canada. J. Halpenny, Winnipeg.—p. 224.
Invalid Occupation as a Guide to Vocational Fitness of Handicapped. N. L. Burnette, Toronto.—p. 227.
Relation of Juvenile Court to Community. H. G. Macgill, Vancouver, B. C.—p. 232.
Account of Work for Feebleminded in Hamilton, Ontario. T. H. Willis, Toronto.—p. 237.

Colorado Medicine, Denver

December, 1919, **16**, No. 12

State Program for Control of Venereal Disease. S. R. McKelvey, Denver.—p. 289.
Organotherapy. H. W. Hazlett, Paonia.—p. 293.
Cholesteatoma Involving Orbit. F. R. Spencer and C. L. LaRue, Boulder.—p. 302

Delaware State Medical Journal, Wilmington

July-August-September, 1919, **10**, No. 3

Dermoid Cyst in Child. S. C. Rumford, Wilmington.—p. 8.
Cited for Distinguished Service. L. S. Conwell, Camden.—p. 10.
Autointoxication. C. deJ. Harbordt, Dover.—p. 23.

Georgia Medical Association Journal, Atlanta

November, 1919, **11**, No. 7

Twenty Five Cesarean Sections. C. F. Proctor, Athens.—p. 117.
Transchoroidal Therapy in Neurosyphilis. C. E. Dowman, Atlanta.—p. 119.
Early Diagnosis and Treatment of Cancer. M. B. Hutchins, Atlanta.—p. 121.
Appendicitis. L. C. Fischer, Atlanta.—p. 123.
Gastric Complications of Vascular Hypertension. G. Giddings, Atlanta.—p. 128.
Case of Intestinal Paresis Following Abdominal Section. A. M. Dimmock, Atlanta.—p. 132.

Illinois Medical Journal, Oak Park

December, 1919, **36**, No. 6

Medical Organization. W. Johnson, Chicago.—p. 289.
Of the World as Well as in It. R. J. Folonie, Chicago.—p. 292.
Ileus; Ruptured Ectopic Pregnancy; Appendicitis; Ulcer of the Stomach and Duodenum. D. R. Connell, Beloit, Wis.—p. 294.
Abdominal Emergencies. D. J. Twohig, Fond du Lac, Wis.—p. 298.
Relation of Dust to Spread of Tuberculosis. H. C. Sweany and C. C. MacLane, Chicago.—p. 302.
*Optic Neuritis and Etiologic Relation of Diseased Tonsils; Report of Case. C. B. Welton, Peoria.—p. 305.
New Problems in Empyema. E. G. Beck, Chicago.—p. 311.
Skin Grafting. J. F. Pember and T. W. Nuzum, Janesville, Wis.—p. 314.
Study of One Hundred Cases of Suspected Chronic Nasal Accessory Sinus Disease with a Report of Roentgen-Ray Findings. H. C. Ballenger, Chicago.—p. 316.

Optic Neuritis and Diseased Tonsils.—The case of optic neuritis cited by Welton is of interest: first, because of the obscure etiology; second, because of retention of normal central vision with an inflammation of the nerve head present, but with permanent damage sustained by the nerve, shown in the contraction of the color fields, and third, because of the apparent nonparticipation of the tonsils and the quick relief obtained with removal of this remote point of infection.

Indiana State Medical Ass'n Journal, Fort Wayne

Dec. 15, 1919, **12**, No. 12

Treatment of Tetanus; Report of Six Cases. C. G. Beall, Fort Wayne.—p. 321.

Journal of Biologic Chemistry, Baltimore

December, 1919, **40**, No. 2

*Effects of Malt and Malt Extracts on Scurvy and Alkaline Reserve of Blood. J. F. McClendon, W. C. C. Cole, O. Engstrand and J. E. Middlekauff, Minneapolis.—p. 243.
*Toxicity of Phenylacetic Acid. C. P. Sherwin and K. S. Kennard, New York.—p. 259.
*Chemical Identification of Thyroxin. E. C. Kendall and A. E. Osterberg, Rochester, Minn.—p. 265.
*Carbonic Acid and Carbonates in Cows' Milk. L. L. Van Slyke and J. C. Baker, Geneva, N. Y.—p. 335.
*Conditions Causing Variation in Reaction of Freshly Drawn Milk. L. L. Van Slyke and J. C. Baker, Geneva, N. Y.—p. 345.
Method of Preliminary Detection of Abnormal Milk Based on Hydrogen Ion Concentration. J. C. Baker and L. L. Van Slyke, Geneva, N. Y.—p. 357.
Extraction and Concentration of Water-Soluble Vitamin from Brewers' Yeast. T. B. Osborne and A. J. Wakeman, New Haven.—p. 383.
Crystalline Salts of Uridinphosphoric Acid. P. A. Levene, New York.—p. 395.
Identity of Water-Soluble Growth-Promoting Vitamin and the Antineuritic Vitamin. H. H. Mitchell, Urbana, Ill.—p. 399.
Structure of Yeast Nucleic Acid. IV. Ammonia Hydrolysis. P. A. Levene, New York.—p. 415.
*Activity of Lung Extract, as Compared to Extracts of Other Tissues, in Inducing Coagulation of Blood. C. A. Mills, Cincinnati.—p. 425.
Hydrolysis of Stizolobin, Globulin of Chinese Velvet Bean, Stizolobium Niveum. D. B. Jones and C. O. Johns, Washington, D. C.—p. 435.
*Nutritive Value of Banana. H. K. Sugiura and S. R. Benedict, New York.—p. 449.
Physiology of Phosphorus and Calcium Metabolism of Dairy Cows. E. B. Meigs, N. R. Blatherwick and C. A. Cary, Washington, D. C.—p. 469.
Fat-Soluble Vitamin. II. Fat-Soluble Vitamin Content of Roots, Together with Some Observations on Their Water-Soluble Vitamin Content. H. Steenbock and E. G. Gross, Madison, Wis.—p. 501.
Chemotherapeutic Studies on Organic Compounds Containing Mercury and Arsenic. G. W. Raiziss, J. A. Kolmer and J. L. Gavron, Philadelphia.—p. 533.

Effects of Malt and Malt Extracts on Scurvy.—The study made by McClendon and others shows that acidosis has nothing to do with scurvy. Sprouted cereal grains, especially after the acrospire projects one-half inch beyong the grain, are rich in antiscorbutic substance. The antiscorbutic substance in sprouted grain is not destroyed by heating to 70 C. to gelatinize the starch. The antiscorbutic substance may be extracted from sprouted barley after crushing it between steel rolls that are so close together that the cells of the acrospire are crushed.

Toxicity of Phenylacetic Acid.—As a result of feeding excessive doses of phenylacetic acid to a dog, Sherwin and Kennard found that the secreting epithelium of the proximal convoluted tube of the kidney was markedly affected; the endothelium of the blood vessels was not affected; the epithelium of the arched collecting tubule showed evidence of a destructive action, while that of the straight collecting tubule appeared to escape. The secreting epithelium of the

limbs of Henle's loop was most distinctly involved. The interstitial tissue of the kidney was found not to be injured, and the liver changes, the authors believe, are in all probability secondary.

Chemical Identification of Thyroxin.—In this, the second paper o fa series, Kendall and Osterberg report in detail on the most important physical and chemical properties of thyroxin.

Carbonates in Cow's Milk.—In the case of twenty-five samples of milk drawn from separate quarters of the udder, Van Slyke and Baker found that the CO_2 varies from 7 per cent. by volume to 86 per cent.; the p_H value varies from 6.50 to 7.16, in a general way increasing with the CO_2 content; the degree of acidity, as measured by titration, tends to decrease with increase of CO_2 content. In comparison with the results of other workers, the results obtained by us are higher. The CO_2 content of normal milk appears to be about 10 per cent. by volume.

Variations in Reaction of Fresh Milk.—The object of this investigation was the study of the extent and causes of the variation of the hydrogen ion concentration in freshly drawn cow's milk.

Activity of Lung Extract.—The strong coagulative activity of lung and kidney tissues, and to a lesser degree of skin, Mills says, is suggestive of a possible protective mechanism against hemorrhage.

Nutritive Value of Banana.—According to Sugiura and Benedict, a diet consisting of bananas, 83.0 per cent., casein, 16.0 per cent., yeast, 0.5 per cent., and protein-free milk, 0.5 per cent., is an adequate diet for the growth, maintenance, reproduction and perfect milk production of the albino rats.

Journal of Cutaneous Diseases, Chicago

December, 1919, **37**, No. 12

Parapsoriasis Lichenoides Linearis. Report of Case. H. J. F. Wallhauser, Newark, N. J.—p. 763.
Relationship of Kidney Function to Certain Skin Diseases Based on Phenolsulphonephthalein Test. R. H. Davis and M. F. Engman, St. Louis.—p. 772.
Dermatology and Syphilology in a Medical Advisory Board. H. H. Hazen, Washington, D. C.—p. 779.
Arithmetical Computation of Roentgen Dosage. G. M. MacKee, New York.—p. 783.
*Treatment (?) of Psoriasis. W. A. Pusey, Chicago.—p. 791.

Treatment (?) of Psoriasis.—Pusey records a case which illustrates the futility of most of the empiric treatments for psoriasis to which the patient had submitted in the course of three years. The patient had been given emetin, arsphenamin, staphylococcus and streptococcus vaccine, Fowler's solution and autoserum. He had been on as strict a nonprotein diet as he could devise for himself for seven months. He had his tonsils removed, seven teeth extracted and then had a few roentgen-ray exposures. In spite of these measures, the psoriasis showed no improvement; in fact, no material change of any sort.

Journal of Experimental Medicine, Baltimore

Dec. 1, 1919, **30**, No. 6

*Strain of Connective Tissue Seven Years Old. A. H. Ebeling, New York.—p. 531.
Streptolysin Production in Carbohydrate Medium. F. A. Stevens and S. A. Koser, M. C., U. S. Army.—p. 539.
*Pfeiffer's Bacillus and Influenza: A Serologic Study. M. Wollstein, New York.—p. 555.
Single Cell Method of Influence of Homologous Antipneumococcic Serum on Growth Rate of Penumococcus. M. A. Barber, New York.—p. 569.
*Antiblastic Phenomena in Active Acquired Immunity and in Natural Immunity to Pneumococcus. M. A. Barber, New York.—p. 589.
Blood Viscosity: I. Conditions Affecting Viscosity of Blood After Withdrawal from Body. L. Langstroth.—p. 597.
Effect of Hypotonic and Hypertonic Solutions on Fibroblasts of Embryonic Chick Heart in Vitro. M. J. Hogue.—p. 617.

Old Strain of Connective Tissue in Culture.—A fragment of heart extirpated from a chick embryo, Jan. 17, 1912, is still alive. It has been under cultivation in vitro for a period of over seven years and has undergone 1,390 passages. Ebeling describes the technic employed in perpetuating the strain during the last five years and in measuring the increase of the tissue, the factors which influence the rate of growth, and the present condition of the strain. The medium used for perpetuating the strain is composed of equal volumes of chicken plasma and chick embryo extract.

Pfeiffer's Bacillus and Influenza.—The serums of patients convalescent from influenza yield reactions for agglutinins, precipitins, and complement binding bodies with antigens of Pfeiffer's bacillus. These reactions appear constantly at the end of the first week, increase in intensity during the second week, and remain demonstrable for a period of from two to four months. They were most complete in the serum of patients suffering from postinfluenzal pneumonia. It is also demonstrated by Wollstein that the strains of Pfeiffer's bacillus isolated during the epidemic were morphologically and biologically similar to the strains isolated from influenza cases in other years, and antigenically they differed from them only quantitatively. The patients' serologic reactions indicate the parasitic nature of the bacillus, but are not sufficiently stable and clean cut to signify that Pfeiffer's bacillus is the specific inciting agent of epidemic influenza. They do, however, indicate that the bacillus of Pfeiffer is at least a very common secondary invader in influenza, and that its presence influences the course of the pathologic process.

Antiblastic Phenomena in Immunity to Pneumococcus—Barber gives the results of a series of experiments made with a special technic for the purpose of testing whether or not so-called antiblastic phenomena or bactericidal phenomena play any part in immunity to pneumococcus

Journal of Immunology, Baltimore

September, 1919, **4**, No. 5

Thermolabile and Thermostabile Antilysins (Anticomplementary Substances) of Human Serum. T. Kyutoku, Philadelphia.—p. 239.
Removal of Hemaglutinin from Rabbit Antihuman Serum. J. E. Sands and L. B. West, Philadelphia.—p. 275.
*New Method of Testing Antityphoid Serum. Y. Fukuhara and M. Yoshioka, Osaka, Japan.—p. 285.
*New Method of Testing Antitoxic Dysentery Serum. Y. Fikuhara, Osaka, Japan.—p. 299.
Experimental Purpura. M. J. Gottlieb, New York.—p. 309.
*Antigenic Property of Pfeiffer Bacillus as Related to Its Value in Prophylaxis of Epidemic Influenza. C. W. Duval and W. H. Harris, New Orleans.—p. 317.
*Poisons of Influenza Bacillus. J. T. Parker, New York.—p. 331.
*Existence of a Multiplicity of Races of B. Influenzae as Determined by Agglutination and Agglutinin Absorption. E. Valentine and G. M. Cooper, New York.—p. 359.
Protein Intoxication. IV. Histologic Lesions Produced by Injections of Pepton. T. H. Boughton, Chicago.—p. 381.
Production of an Antihemotoxin for Hemotoxin of Bacterium Welchii (Bacillus Aerogenes Capsulatus). W. W. Ford and G. H. Williams, Baltimore.—p. 385.

Testing Antityphoid Serum.—The new method of testing typhoid antiserums worked out by Fukuhara and Yoshioka is as follows: With the use of an arbitrary protective unit of antiserum (standard serum), the L_+ dose of a typhoid culture is determined; with this L_+ dose see p. 290 the serum to be tested is mixed in varying quantities; the largest amount of the serum which will just permit the death of a guinea-pig of 250 gm. weight within twenty-four hours after the mixture has been injected into the peritoneal cavity is taken as the protective unit. The value of an antityphoid serum is expressed by the number of such protective units contained in 1 c.c. of the serum. Any strain of typhoid bacteria can be used for the test. The virulence control is not important.

Testing Antitoxic Dysentery Serum.—In order to determine the antitoxic value of antidysentery serum it is necessary to select a standard serum which can be preserved in a dry state in the vacuum tubes of Ehrlich. The standard antitoxin unit adopted by Fukuhara was the amount that neutralized 100 minimal lethal doses of the toxin which at that time was available. For the testing of other antidysentery serum the so-called L. dose of dysentery toxin was adopted as the smallest amount which when mixed with the antitoxin unit and injected intravenously into a rabbit of 1,500 to 2,000 gm. weight caused the death of the animal within from four to five days. The L. dose of the toxin is employed, in the usual manner, to determine the relative antitoxic value of newly prepared antiserum.

Antigenic Property of Pfeiffer Bacillus.—During the height of the epidemic of influenza in New Orleans more

than 5,000 persons were vaccinated by Duval and Harris with a specially prepared protein suspension of the Pfeiffer bacillus. Of this number approximately 90 per cent. did not contract influenza, either during the period of the epidemic or its recrudescence which occurred two months afterward. The culture used in the preparation of the vaccine was grown on the surface of hemoglobin nutrient agar at a temperature of 37 C. for from thirty-six to forty-eight hours, when the growth was washed off and suspended in physiologic sodium chlorid solution and immediately devitalized by being saturated with chemically pure chloroform.

Poisons of the Influenza Bacillus.—While the evidence obtained by Parker is by no means conclusive, it seems probable that the poison of *B. influenzae* contains two poisons; the first, the more important one, a true soluble toxin, filtrable, thermolabile, against which antitoxins can be produced; the second, present also in the vaccine of *B. influenzae*, also filtrable, but differing from the first poison in its thermostability, and in the fact that it is not detoxicated by the antitoxin.

Multiplicity of Races of B. Influenzae.—The results recorded by Valentine and Cooper are held to indicate that under the term *B. influenzae* are included a group of organisms which, for practical purposes, is heterogeneous in character as determined by immunologic reactions. The existence of a multiplicity of races is advanced as evidence that *B. influenzae* is not the primary etiologic agent in epidemic influenza.

Journal of Infectious Diseases, Chicago

December, 1919, **25**, No. 6

*Pathogenicity of Bacillus Influenzae for Laboratory Animals. H. Albert and S. R. Kelman, Iowa City.—p. 433.
*Adjustment of Reaction of Culture Mediums. E. A. Fennel and M. B. Fisher, Washington, D. C.—p. 444.
Complement Fixation with Acid Fast Bacteria. I. Study of Various Organisms with Immune Rabbit Serums. J. V. Cooke, New York.—p. 452.
*Complement Fixation with Acid Fast Bacteria. II. Leprosy. J. V. Cooke, New York.—p. 474.
*Complement Fixation with Acid Fast Bacteria. III. Tuberculosis. J. V. Cooke, New York.—p 491
*Amebic Dysentery in California W. W. Cort and J. D. McDonald, Berkeley.—p. 501.
Streptolysin. Y. Nakayama, Chicago.—p. 509.

Pathogenicity of Bacillus Influenzae.—The Pfeiffer influenza bacillus was found by Albert and Kelman to be distinctly pathogenic to mice, guinea-pigs and rabbits. Although the symptoms of intoxication as seen in lower animals following injections of the Pfeiffer bacillus are suggestive of the profound intoxication seen in connection with many cases of the epidemic disease influenza in the human being, the authors feel that their experiments do not furnish any proof that the Pfeiffer bacillus has any specific etiologic relationship to that disease. On the other hand, they suggest that a possible etiologic relationship cannot be ignored.

Reaction of Culture Mediums.—According to Fennel and Fisher the adjustment of bacteriologic culture mediums according to hydrogen-ion concentration, because of its accuracy and simplicity, should wholly supplant the phenolphthalein (total acidity) method.

Complement Fixation in Leprosy.—In a study of twenty cases of leprosy of the nodular, macular, nerve and mixed type, Cooke found that leper serums contain complement binding substances that react with antigens of acid fast bacilli and give an acid fast fixation similar to that obtained with serums of rabbits immunized with acid fast organisms. Some serums contain these antibodies in rather high concentration, notably those from cases of the nodular type of the disease; other serums show a relatively low antibody content. The serums of high titer may give a nonspecific fixation also with nonacid fast antigens and with lipoidal (Wassermann) antigen, but only in comparatively low dilutions. It is suggested that this attribute of such high titer leper serums may explain in a certain percentage of positive Wassermann reactions described in leprosy. The acid fast reaction given by leper serums with acid fast bacterial antigens prevents the use of the complement fixation reaction in obtaining evidence of the etiologic importance of any acid fast organism isolated from leprosy.

Complement Fixation in Tuberculosis.—In tuberculosis, the serum contains complement binding substances that give fixation when members of the acid fast group of bacteria are used as antigen. These antibodies show a considerable difference in concentration in different serums, but this difference in titer does not correspond with the severity of the infection in the different cases. A relatively small percentage of patients with active tuberculosis have too small an amount of complement fixing antibody to be recognized in the test. These cases are analagous to those of syphilis that give a negative Wassermann reaction. Cooke found the test of some value in calling attention to unrecognized tuberculosis, but it does not always indicate a clinically active process. Leprosy and tuberculosis are the only human infections that give the reaction, and since it is specific for the acid fast group of bacteria, the term acid fast fixation seems appropriate.

Amebic Dysentery in California.—As a result of a circular letter sent out by the California State Board of Health a total of fifteen cases of amebic dysentery were reported from eight hospitals. No cases of dysentery caused by flagellate protozoans were reported.

Medical Record, New York

Oct. 25, 1919, **96**, No. 17

Present Status of Vaccination Against Influenza. F. E. Stewart, Philadelphia.—p. 681.
*Treatment of Influenza and Complications. J. Diner, New York.—p. 685.
*General Treatment of Influenza. N. P. Barnes, Washington, D. C.—p. 687.
Control of Epidemic Influenza in Large Institution. H. C. Wood, Jr., Philadelphia.—p. 689.
Lipovaccines. A. P. Hitchens, Indianapolis.—p. 692.
*Therapeutics of Aspidosperma. R. W. Wilcox, New York.—p. 698.

Nov. 8, 1919, **96**, No. 19

Compulsory Health Insurance; Its Promises and Its Dangers. E. M. Stanton, Schenectady, N. Y.—p. 749.
Possible Dietary Causes of Rheumatism. J. M. W. Kitchen, East Orange, N. J.—p. 752.
Mental Diseases. H. Laveson, New York.—p. 754.
Donor and Receptor in Regard to Blood Groups. A. L. Benedict, Buffalo.—p. 761.
Symptoms Associated with Dentition. E. Moody, Joplin, Mo.—p. 762.
Case of Scarlet Fever with Pneumonia as Complication. A. Lobell, New York.—p. 763.

Treatment of Influenza and Complications.—This paper was abstracted in THE JOURNAL, Aug. 9, 1919, p. 448.

Treatment of Influenza.—This paper was abstracted in THE JOURNAL, Aug. 16, 1919, p. 554.

Therapeutics of Aspidosperma.—Wilcox considers this drug a valuable remedy when the respiration is embarrassed, as in emphysema, chronic bronchitis or chronic pneumonia. Given in proper doses, it relieves not only the dyspnea but also the cyanosis and sense of suffocation. It appears to assist the oxygenation of the blood as well as to stimulate the respiratory center. Aspidospermine represents fairly well the activity of the drug with the further advantage that it may be used hypodermically in a dose of one-half grain (0.03 gm.).

Nebraska State Medical Journal, Norfolk

November, 1919, **4**, No. 11

Laennec. L. Crummer, Omaha.—p. 315.
Immunization Against Diphtheria. J. H. Dillon, Lincoln.—p. 319.
Dupuytren and His Contemporaries. A. F. Jonas, Omaha.—p. 320.
History of Omaha-Douglas County Medical Society. A. B. Somers, Omaha.—p. 324.
Series of Interesting Accident Cases. C. H. Waters, Omaha.—p. 325.
Etiology and Pathology of Cancer. D. T. Quigley, Omaha.—p. 328.
Postinfluenzal Pulmonary Complications Simulating Tuberculosis. W. N. Anderson, Omaha.—p. 332.
Nitrous-Oxid Anesthesia for Obstetric Practice in Country. H. J. Wertman, Milford.—p. 335.
*A Working Classification of Tumors. R. G. Breuer, Omaha.—p. 336.

Working Classification of Tumors.—Breuer's classification of tumors is based on their histologic, histogenetic and clinical characteristics: I. Tumors due to reproductive power of tissues: A. From the germ cell. B. From the somatic cell blastomata (unipotential). C. From the undifferentiated

somatic cell: Mixed tumors. II. Tumors due to errors of development: A. Failure progression of development: B. Failure of regression of development.

New York Medical Journal

Nov. 29, 1919, **110,** No. 22

Application of Cardiovascular Studies of War to Civil Practice. J. H. Musser, Philadelphia.—p. 877.
Occupational Causes of Ill Health. L. I. Harris, New York.—p. 880.
Capillary and Venous Circulation in Relation to Disease. A. T. Livingston, Jamestown, N. Y.—p. 884.
Syphilitic Ocular Affections. A. Brav, Philadelphia.—p. 889.
Neurasthenia. A. Sauthoff, Mendota, Wis.—p. 891.
New Needles for Sewing in Deep Cavities. A. Kahn, New York.—p. 893.
Surgery at Base Hospital. A. G. Brenizer, Charlotte, N. C.—p. 894.
Case of Lethargic Encephalitis. H. Hershberg, New York.—p. 899.

Dec. 13, 1919, **110,** No. 24

Modern Commentaries on Hippocrates. J. Wright, Pleasantville, N. Y.—p. 965.
Syphilis and Its Serologic Significance. D. Kaplan, New York.—p. 969.
Influenza Prevention in Army Camps. W. S. Cornell, Philadelphia.—p. 973.
Benzyl Benzoate; Résumé of Work Done by Various Observers. J. M. Boice, Philadelphia.—p. 977.
Nature and Treatment of Acne Vulgaris. O. L. Levin, New York.—p. 982.
Health Protection and Sickness. H. Emerson, New York.—p. 985.
*Treatment of Burns. A. W. Hengerer, Buffalo.—p. 988.

Treament of Burns.—In every case of severe burn, Hengerer immediately gives full dose of morphin. Then he covers the damaged area with a clean towel or absorbent cotton, gets the patient to the hospital as soon as possible, administers an anesthetic and removes the damaged tissue by scrubbing the burned area with ordinary hand brushes until the surface appears to be covered with normal tissue. In scrubbing the burned area, the object is to remove all of the destroyed tissue. The scrubbing should be done as soon after the burn has occurred as possible but the length of time is not necessarily a contraindication. Hengerer has scrubbed burns three days after their occurrence with happy results. Brushes are changed frequently and aspesis should be employed as much as possible. The wound may then be dressed with a thick covering of petrolatum on gauze on which a small amount of bismuth subiodid is sprinkled, or the wound may be covered with wax. Hengerer claims that patients with over one half of the body burned have been saved by this treatment, and that the resulting horrible deformities and disfiguration so often seen were greatly lessened. The dressings are bearable and often painless, the time of convalescence is greatly shortened. Hengerer terms this the surgical treatment of burns.

New York State Journal of Medicine

November, 1919, **19,** No. 11

Plastic Surgical Restoration of War Injured Faces. G. V. I. Brown, Milwaukee.—p. 385.
Epidemiology of Influenza. P. B. Brooks, Albany.—p. 391.
Clinical Aspects of Influenza. W. R. Williams, New York.—p. 393.
Measure and Development of Nutrition in Childhood. G. M. Retan, Syracuse.—p. 397.

Northwest Medicine, Seattle, Wash.

November, 1919, **18,** No. 11

Therapeutic Problems of Future. G. W. Middleton, Salt Lake City.—p. 225.
Value of Tuberculin Cutaneous Test. C. C. Browning, Los Angeles.—p. 230.
Ophthalmoscopic War Injuries. E. E. Maxey, Boise.—p. 232.
Histogenesis of Papillary Carcinoma of Bladder. J. R. Corkery, Spokane.—p. 234.

Pennsylvania Med. Journal, Chicago, and Athens, Pa.

December, 1919, **23,** No. 3

The Milk Problem. C. H. Miner, Wilkes-Barre.—p. 115.
First Aid Industrial Accidents. M. J. Shields, Washington, D. C.—p. 117.
The Industrial Cripple. F. D. Patterson, Harrisburg.—p. 119.
*Diagnosis of Cholecystitis and Gallstone. D. Riesman, Philadelphia.—p. 120.
*Value of Roentgenologic Study of Gastro-Intestinal Tract. H. K. Pancoast, Philadelphia.—p. 125.
Thorough Study vs. Exploratory Incision in Gastro-Intestinal Lesions. J. H. Gibbon, Philadelphia.—p. 127.
*Surgical Treatment. A. C. Wood, Philadelphia.—p. 128.
*Medical Treatment of Diseases of Gastro-Intestinal Tract. J. A. Lichty, Pittsburgh.—p. 134.
*Attitude of General Practitioner. W. E. Robertson, Philadelphia.—p. 139.
*Value of High Rectal Enema. H. D. Jump, Philadelphia.—p. 142.
*Cancer of Esophagus. E. J. Patterson, Pittsburgh.—p. 147.
Community Organization. C. R. McKinniss, Pittsburgh.—p. 150.
Duty of State and Physician to Mental Patient. O. Copp, West Philadelphia.—p. 152.
*Foot Prophylaxis in Childhood. J. T. Rugh, Philadelphia.—p. 155.
Practical Points in Infant Feeding. F. C. Monks, Kittanning.—p. 158.
Anesthesia in Children. E. W. Beach, Philadelphia.—p. 161.
The Antinarcotic Law. T. S. Blair, Harrisburg.—p. 164.

Cholecystitis.—This paper was abstracted in THE JOURNAL, Nov. 15, 1919, p. 1548.

Roentgenologic Study of Gastro-Intestinal Tract.—This paper was abstracted in THE JOURNAL, Nov. 15, 1919, p. 1548.

Surgical Treatment.—This paper was abstracted in THE JOURNAL, Nov. 15, 1919, p. 1549.

Medical Treatment of Diseases of Gastro-Intestinal tract.—This paper was abstracted in THE JOURNAL, Nov. 8, 1919, p. 1468.

Attitude of General Practitioner. — This paper was abstracted in THE JOURNAL, Nov. 8, 1919, p. 1463.

Value of High Rectal Enema.—This paper was abstracted in THE JOURNAL, Nov 8, 1919, p. 1467.

Cancer of Esophagus.—Patterson advocates endoscopic examination in these cases, but warns that before any person is examined esophagoscopically it is of paramount importance to study the esophagus by means of fluoroscopy and roentgenoscopy in order to exclude aneurysm and to observe any hesitance in the normal function of the esophagus or obstruction in the passage of the barium meal through the esophagus. Three cases are reported.

Foot Prophylaxis in Childhood.—The prevention of foot disability in children, Rugh says, centers about two great classes of conditions, viz., the congenital and the acquired. Under all conditions, however, whether congenital or acquired, intrinsic (within the foot) or extrinsic (without the foot), fully 98 per cent. of disabilities in the foot in childhood (as, indeed, also in adults) are mechanical both in origin and in character. Every case examined must be looked at with this fact in mind, and whatever the type of the disability, its mechanics must be recognized and proper treatment advised. The various types of foot disorder and their treatment are discussed by Rugh.

Tennessee State Medical Association Journal, Nashville

November, 1919, **12,** No. 7

Acriflavine in Treatment of Gonorrhea and Allied Conditions. P. Bromberg, Nashville.—p. 239.
Plea for More Perfect Anatomic Results in Fractures. S. R. Miller, Knoxville.—p. 245.
Multiple Neuritis; Its Treatment. D. Hayes, Tracy City.—p. 246.
Injuries of Cornea. W. W. Hill, Harriman.—p. 248.
*Congenital Diverticula of Intestines: Report of Case. W. T. Black, Memphis.—p. 253.
The More Common Psychoses. G. A. Hatcher, Nashville.—p. 258.

Congenital Diverticula.—In Black's case a tumor arose from the tip of a congenital diverticulum of the sigmoid. This tumor was connected only to the serosa side of the diverticulum. Potentially it was a malignant growth. A diverticulitis or perforation could be assigned as a predisposing or existing cause, although it could also be attributed to a fetal inclusion.

Texas State Journal of Medicine, Fort Worth

December, 1919, **15,** No. 8

Diagnosis and Treatment of Goiter. A. C. Scott, Temple.—p. 275.
Surgery of Peripheral Nerves. W. L. Crosthwaite, Waco.—p. 279.
Mental and Nervous Diseases in Young People. G. F. Witt, Dallas.—p. 280.
Potential Dementia Praecox. T. Dorbandt, San Antonio.—p. 281.
Movable Retropositions of Uterus, Their Mechanism and Significance. M. C. O'Brien, San Antonio.—p. 284.
Acute Infectious Disease of Female Pelvic Cavity; Report of Cases. R. J. Alexander, Waco.—p. 287.
Mastoid Operation Under Local Anesthesia. T. A. Dickson, Houston.—p. 290.

FOREIGN

Titles marked with an asterisk (*) are abstracted below. Single case reports and trials of new drugs are usually omitted.

Bulletin of Naval Medical Association of Japan, Tokyo

August, 1919, No. 25

Non-Gas Forming Bacillus Paratyphosus B. J. Ishiguro.—p. 1.
A Case of Extension Ulcers (Kocher) Following Strangulated Ileus of the Jejunum. T. Orimo.—p. 2.

Dublin Journal of Medical Science

November, 1919, Third Series, No. 575

Teaching of Pathology. T. T. O'Farrell.—p. 177.
The Ductless Glands. G. H. Davis.—p. 192.

Lancet, London

Dec. 6, 1919, **2**, No. 5023

The Surgical Tradition. J. Tweedy.—p. 1009.
Plea for Better Teaching of Oto-Rhino-Laryngology. H. Tilley.—p. 1014.
Treatment of Malaria in England. S. P. James.—p. 1016.
Present Position of Roentgen Rays and Radium in Gynecology. D. Turner.—p. 1018.
*Diathermy. N. Patterson.—p. 1020.
Sporulation of Syphilis Organism as Seen on the Dark Ground. G. Lundie and F. H. Goss.—p. 1024.
*Frequency of Right Inguinal Hernia After Appendectomy by the "Gridiron" Incision. G. H. C. St. G. Griffiths.—p. 1026.
Environmental Factor in Causation of Beri-Beri. K. Simpson.—p. 1027.
Case of Carcinoma of Transverse Colon and Intussusception. I. Back and A. T. Edwards.—p. 1028.
*Unusual Form of Ventral Hernia. F. L. Apperly.—p. 1029.
A Pseudo-Paratyphoid Carrier. R. C. Watts.—p. 1029.

Diathermy in Mouth Cancer.—In the treatment of epithelioma of the mouth and pharynx, Patterson regards diathermy as the best method to adopt in all cases, not only in cases on the borderland of being inoperable by the knife. No excision of a carcinomatous growth in the tongue, mouth or pharynx, however small that growth may be, should be carried out with the knife if diathermy is available. Encouraged by the good results in cases where the disease was limited, Patterson has applied the method in advanced cases where nothing could really be expected from treatment of any kind. The results in selected cases have been extraordinarily good. Patterson believes that if patients could only be seen early enough a large number of cures would probably be effected. It has been too much the habit, he says, and it is still too much the habit of surgeons to regard this method as a palliative measure only, and as one to be reserved for "inoperable" cases.

Right Inguinal Hernia Following Appendectomy.—Griffiths has collected eleven cases of inguinal hernia following appendectomy. Of these, ten were on the right side and the eleventh appeared as a left inguinal hernia. The date of appearance of these hernias varied from a few months to three and one half years after appendectomy was performed. In one case the hernia followed twelve years after operation, but this case had also been complicated by an operation for ventral hernia in the old scar. This late occurrence may account for this end result or complication having passed unnoticed so long. In ten of the cases the gridiron incision was used, none of the incisions being near the outer border of the right rectus muscle. In the eleventh case, a Battle's scar was present, the hernia having appeared eighteen months after operation. The length of the scars varied from two and one half inches to a maximum of six inches. The situation, too, differed somewhat in position, from immediately above Poupart's ligament and the right iliac crest to near the midpoint between the right anterior superior spine and the umbilicus. The hernias were mostly small. The greater majority of the original operations for appendicitis had not required draining for pus, and the incision had been closed in the ordinary way. In explanation of this occurrence, Griffiths suggests that it may occur in two ways, either by avulsion or division of the fine muscular nerve twigs to the lower portions of the internal oblique and transversalis muscles during the opening of the peritoneal cavity, and leading to a partial or complete atrophy of the muscle fibers in the region of the internal abdominal ring; or, on the other hand, by compression of the same nerves by the encircling catgut sutures in sewing up the incisions in the transversalis and internal oblique muscles, in repairing the abdomen after appendectomy.

Unusual Form of Ventral Hernia.—In Apperly's case the hernia protruded from the site of an artificial anus, made about six inches above the cecum. Part of the wall of the colon had been forced through the colostomy opening, and by stretching and turning inside out, formed the sac of a hernia, the content of which was a loop of gangrenous small intestine 10 inches long. The mucous membrane of the colon was so stretched and shining as to be indistinguishable from peritoneum. The gangrenous contents of the sac were readily removed when relieved from constriction and were resected. A lateral anastomosis was made, the colostomy being returned to its normal position.

Japan Medical World, Tokyo

Nov. 16, 1919, No. 309

Tuberculous Bacillary Antigen. T. Kodama and T. Hayashi.
Charge of Electrolytic Curve of Kakka Blood and Concentration of Hydrogen-Ion in Same. M. Sugawara.
Influence of Various Drugs Against Pulmonary Blood Circulation. K. Abe.

Nov. 23, 1919, No. 310

Physiologic and Pathologic Examination of Nerves and Muscles of Domestic Fowl Suffering from So-Called Polished Rice Disease. G. Kato and S. Shizume.

Nov. 30, 1919, No. 311

*Experimental Study of Spirochete of Weil's Disease. S. Wataguchi.
*Penetration of Drugs into Spinal Cavity and Their Disposal. H. Hashimoto.
Serum of Patient with Reference to Wassermann's Test. R. Kobayashi.

Cultivation of Spirochete of Weil's Disease.—Wataguchi succeeded in cultivating the spirochete of Weil's disease on a watery mixture of the blood. Guinea-pig inoculation with these cultures resulted in a reproduction of the disease, and an immunizing serum was obtained from rabbits. Specific immune bodies were found, and immunity was conferred by injection. All this work was done on animals. Further work is now in progress to apply these findings to human beings.

Penetration of Drugs Into Spinal Cavity and Their Disposal.—Iodin and hexamethylenamin were found in the urine by Hashimoto after injection of small amounts into the cerebrospinal fluid. However, it was more difficult to detect iodin in the cerebrospinal fluid, no matter whether given by mouth or intravenously, than was the case with hexamethylenamin. The penetration of these drugs seems to depend on the degree of the pathologic changes present. The greater the change, the less the degree of penetrability. Hashimoto claims that this finding is of value clinically.

Medical Journal of Australia, Sydney

Nov. 8, 1919, **2**, No. 19

Intestinal Obstruction. R. A. Macleod.—p. 391.
Method of Ventro Suspension of the Uterus. W. T. Chenhall.—p. 395.
Lesion of Optic Thalamus. A. E. Mills.—p. 397.

Nov. 15, 1919, **2**, No. 20

Cardiac Murmurs. J. M. Gill, London.—p. 411.
*Apparent Transmission of Leprosy to a Macaque Monkey. B. Bradley, Sydney.—p. 414.
*Exophthalmic Goiter Combined with Myasthenia Gravis. G. E. Rennie, London.—p. 416.
A Case of Urethral Calculus. P. S. Clarke, Sydney.—p. 417.

Transmission of Leprosy to a Monkey.—Bradley reports on the inoculation of a monkey, *Macacus rhesus*, with leprous material, and the subsequent development of nodular granulomatous lesions. The material was obtained from a nonulcerated lesion on the eyebrow of a leper. Numerous attempts were made on half of this piece of tissue for cultural purposes by Noguchi's and other methods, anaerobic and aerobic, but in all cases contamination occurred and the cultures were discarded. The remainder of the tissue was used for inoculating the monkey. Sixty days later the disease was seen to have developed. Smear preparations from three lesions showed leprosy bacilli in each one. A few days later the monkey was found dead. A thorough postmortem examination was made. Lepra bacilli were found in the axillary and inguinal glands, and in the spleen.

Exophthalmic Goiter Combined with Myasthenia.—The outstanding feature in Rennie's case is the survival for a period of at least thirteen years of a patient suffering from a combination of the symptoms of two diseases, each of which is considered to have a grave prognosis; and not only a survival after these many years, but a practical recovery of a large amount of health and strength. A second point is the permanence of some defect of the external ocular muscles.

Practitioner, London

December, 1919, **103**, No. 6

Mental Condition Preceding Suicide. W. A. Brend.—p. 401.
Anesthetics. J. Blomfield.—p. 412.
Recent Work in Diseases of Lung. A. J. Jex-Blake.—p. 419.
Tuberculosis Problem. O. Holden.—p. 428.
Recent Work on Diseases of Heart. C. W. Chapman.—p. 436.
Treatment of Sepsis in Nose and Ear by Ionization. A. R. Friel.—p. 449.
*Cesarean Section in Osteomalacia. E. F. Neve.—p. 453.
*Malignant Measles: Two Cases. H. V. O'Shea.—p. 460.
*Delayed Tetanus, with an Unusual Complication. H. K. V. Soltau.—p. 467.

Cesarean Section in Osteomalacia.—This article is based on seventy-three cases of cesarean section with seventeen deaths, a mortality of 23.3 per cent. Neve points out that these osteomalacia patients are poor subjects for operation; therefore even better results may be expected in other maternity cases. He advocates the judicious but extended use of this method of delivery. In any case, he considers craniotomy of a living child as little short of homicide.

Malignant Measles.—The first case cited by O'Shea was one of hemorrhagic measles. Although the nervous symptoms were well marked, approaching the "status typhosus," the most remarkable feature was the extensive hemorrhages, petechial and otherwise, which occurred throughout the body. Contrary to the usual issue, death, the patient recovered. The second case is an example of the toxic type of the infection, which was characterized by a badly developed rash, not well raised above the skin and of a bluish tint. The rash was of the dark malignant type, and hot mustard baths and diaphoresis failed to bring it out properly. Symptoms of meningitis showed themselves on the fourth day, and the condition of the patient became hopeless. Toward the end edema of the lungs set in with the failing circulation, preceded by hyperpyrexia and convulsions. Treatment was of no avail. The child died.

Tetanus with Unusual Complication.—A retained foreign body—subsequently removed—was probably the source of delayed tetanus in Soltau's case, but the interesting feature was not related to the tetanus. The man developed a small abscess, situated just behind the right trochanter. It was opened and drained a week later. Another incision over his right buttock opened up a collection of pus beneath the gluteus maximus. While swabbing out the abscess cavity, a dead worm, covered with blood clot, was removed on the gauze. The worm was 4 inches long, and, after investigation by the pathologist, was pronounced to be a male *Ascaris lumbricoides*. The stools were subsequently examined several times for ova, but only at the first examination, two days later, were any found, and these were ova of *Ascaris lumbricoides*.

Siamese Red Cross Medical Journal, Bangkok

August, 1919, **2**, Pt. 2

Rebellious Consecutive Uterine Hemorrhage in Case of Hydatid Mole Cured by Serotherapy. L. Robert and P. S. Balaraksha.
Case of Epidemic Cerebrospinal Meningitis. L. Robert and M. C. Shavara.

Archives Mens. d'Obstétrique et de Gynécologie, Paris

September, 1919, **8**, No. 9

*Allowing Parturients to Get up Early. Bourcart (Geneva).—p. 465.
Idem. Brouha (Liége).—p. 487.

Allowing Patients to Get Up Early.—Bourcart gives four pages of bibliography, set solid, to sustain the advantages of allowing normal parturients to get up early, as also the patients after operations. The abdominal balance must be restored, however, he says, before patients are allowed to get up. This can be promoted by massage, exercising the abdominal muscles, to reestablish the normal course of the blood. Vibratory massage below the liver is particularly useful for this. A semiseated position or reclining on the side helps further to hasten conditions which permit getting up. The abdominal massage should be done by the physician; usually four or five minutes twice a day are enough at first in hospital practice. After operations for ileus the manual vibratory massage is very useful, possibly warding off peritonitis. Turning to the prone or knee-chest position is also useful.

Allowing Parturients to Get Up Early.—Brouha insists that the getting up should be individual and progressive. The accoucheur must be the one to decide the question in each case, with the intelligent collaboration of the parturient herself and the nurse. This restricts the method, he admits, to the privileged classes, especially as tradition is all against it, and the family usually combat it and ascribe every mishap to the physician's getting the patient up too early. Working women are more robust and bear without harm the inconvenience of overlong staying in bed.

Bulletin de l'Académie de Médecine, Paris

Nov. 18, 1919, **82**, No. 36

General Prophylaxis of Tuberculosis. J. Lignières.—p. 301.
*Pulmonary Mycosis. A. Sartory.—p. 304.
*Intraspinal General Anesthesia. Paul Delmas.—p. 305.
*Mites in Barley. Loir and Legangneux.—p. 308.
*Open Tuberculosis in Dogs and Cats. Gabriel Petit.—p. 310.
*Gas Cysts of the Intestines and Peritoneum. M. Letulle.—p. 315.

Pulmonary Mycosis.—Sartory describes an aspergillus recently cultivated from the sputum of a pulmonary tuberculosis suspect.

Intraspinal General Analgesia.—Delmas states that 600 operations done under his intraspinal technic without a single untoward feature have convinced him of its superiority to other methods whenever general inhalation anesthesia is contraindicated. He dissolves the cocain cold in the patient's own cerebrospinal fluid and injects it at once through a needle 7 cm. long by $1\frac{1}{10}$ mm. interior diameter. The analgesia lasts for about an hour (1 cg. = one-fourth hour). He says that the motor and sensory nerves are not touched, and there are no immediate or remote by-effects. The only precaution necessary is that the patient must not sit up for twenty-four hours.

Barley Mite Eruption.—Sixty-three men unloading a cargo of barley, just arrived from the near East, developed in two or three hours a confluent eruption which was traced to an acarus of the pediculoides group. The eruption yielded to treatment for scabies. Six similar epidemics have been recorded at Havre since 1911. Preventive measures should include sulphur fumigation of the vessel hold, and douches, with change of clothing, for the dock workers.

Tuberculosis in Dogs and Cats.—Petit expatiates on the facility with which human tuberculosis is transmitted to dogs and cats, and the danger of infection from those with intestinal, pulmonary and skin discharging lesions. Any dog or cat should be regarded with suspicion when it is growing thin and coughs, or has a diarrhea or persisting ulceration on the face or neck. The pus from these latter lesions in particular swarms with tubercle bacilli.

Gas Cysts in the Intestines.—Letulle describes with seventeen photomicrographs the histopathogenesis in four cases of gas cysts in bowel and peritoneum.

Journal de Médecine de Bordeaux

Nov. 25, 1919, **90**, No. 22

*The Electrophysiologic Dissociation of Sensation. A. Le Dantec.—p. 483. Conc'n.
Determination of the Total Acidity of the Gastric Juice. L. and H. Barthe.—p. 499.
Extraction of Projectiles in the Chest. H. L. Rocher.—p. 501.
*The Argyll Robertson Sign. Cabannes.—p. 502.

Electrophysiologic Dissociation of Cutaneous Sensation.—See abstract on page 64, Jan. 3, 1920.

The Argyll Robertson Pupil.—Cabannes declares that this sign may be encountered with any lesion of the centripetal

arm of the pupil reflex, not necessarily of syphilitic origin, or in tabes, or general paralysis.

Paris Médical

Nov. 29, 1919, **9**, No. 48

*Opening Lecture of Course on History of Medicine and Surgery. Menetrier.—p. 417.
*Determination of Acidity of Gastric Juice, P. Baufle.—p. 428.

History of Medicine.—Menetrier devotes most of his inaugural lecture to Laennec and the centennial of his work, "L'Auscultation médiate," although auscultation is now usually direct and not "médiate" as he described. Menetrier adds, "As Laennec had been for eighteen years an ardent student of pathologic anatomy, the findings with his new method of exploration explained the lesions to such an extent that he may be called the creator of modern pathology."

Acidity of the Gastric Juice.—Baufle comments on the error resulting from the assumption that the stomach contents obtained after a test meal represent pure gastric secretion. In reality they represent the admixture of gastric juice and what is left of the test meal lingering in the stomach. This admixture varies within a wide range as one or the other of these elements fluctuates, and the proportion of each should be determined. This can be readily accomplished by incorporating with the test meal some substance which does not modify gastric secretion and which is not absorbed by the gastric mucosa. Subtracting the amount of this substance in the stomach contents one hour after taking the test meal, leaves the gastric secretion alone. The substance answering the above conditions may be sodium phosphate (Mathieu and J. C. Roux) or ferric sulphate (Meunier). He prefers the latter. For example, after an Ewald test meal of 340 c.c. extraction of the stomach contents gives 270 c.c. Estimation of the iron in this stomach contents shows that 90 c.c. is what is left of the test meal, and 180 c.c. is the amount of stomach secretion. Applying the Töpfer test this gives 0.584 free hydrochloric acid; 0.146 acid of fermentation; 0.438 combined acid, and total acidity of 1.168 per thousand cubic centimeters. If 180 c.c. of pure gastric juice is found in 270 c.c. of chyme, and 1 c.c. of gastric juice is equal to $\frac{270}{180}$ c.c. of chyme, then 1,000 c.c. is equal to $\frac{270}{180} \times 1{,}000 = 1{,}500$ c.c. The formula is thus A (acidity) $\times \frac{\text{C (chyme)}}{\text{S (gastric juice)}}$. This formula is accurate enough for all practical purposes, while the technic is so simple, Baufle emphasizes, that it should become a routine procedure.

Presse Médicale, Paris

Nov. 26, 1919, **27**, No. 71

*Acute Aseptic Purulent Arthritis. E. Apert and Cambassédès.—p. 713.
*Urobilinuria. Brulé.—p. 714.

Aseptic Purulent Arthritis.—Apert and Cambassédès have encountered two cases in which an acute arthritis of the knee in children seemed to be absolutely aseptic, although puncture brought pus. They cite a third case in which the elbow was the seat of the lesion. Recovery was soon complete and permanent in all. The pus coagulated *en masse*, the fibrin not being destroyed by bacterial action as with ordinary arthritis. The absence of fever—in marked contrast to the swelling of the joint—is also characteristic but is not invariable; in one of the cases there was temperature of 39 C., but a concomitant meningitis was probably responsible for this. Pain occurs only when the joint is very much distended. In one of the children there was no pain, and the arthritis was discovered only by accident during convalescence from scarlet fever. No treatment was attempted in these cases beyond the exploratory puncture, done twice in one case.

Urobilinuria.—Brulé reviews the conflicting views on the origin and clinical significance of urobilinuria. His opinion is that it signifies retention of bile pigments, but the retention is not intense enough for bilirubin to appear in the urine. This retention may be due to lesions in the liver or biliary passages or to hemolytic processes. He never found urobilinuria in normal subjects. By examining the urine for bile salts, as well as for urobilin, we may throw light on the cause of the retention. With obstruction in the biliary passages, the icterus is never dissociated, while with hemolytic icterus there is always dissociation. With liver disease the retention may be complete or dissociated. There may be retention without jaundice, and urobilinuria may be the only sign to warn that the liver is touched. It should be excluded before accepting a pigmentary acholia. Examination for stercobilin is also important as its absence proves that no bile is passing into the feces even when the stools seem of normal color. A further test of this is to examine the blood dust or the fat in the blood after test ingestion of fat.

Nov. 29, 1919, **27**, No. 72

*The Teaching of Obstetrics at Paris. A. Couvelaire.—p. 721.
*Rapid Clinical Tests for Albuminuria and Glycosuria. L. Bauzil.—p. 725.
*Gas Cysts in the Mesentery. Cristol and Porte.—p. 726.

Teaching of Obstetrics at Paris.—Couvelaire reviews the history of the teaching of obstetrics at Paris from the founder of modern obstetrical surgery, the barber-accoucheur, Ambroise Paré (1541) to Tarnier (1857) and the modern school. In conclusion he emphasizes that the science of obstetrics is the science of the generation of man, not merely the science of labor alone.

Tests for Albumin and Sugar in the Urine.—Bauzil describes how he has simplified the technic for these tests so that any practitioner can determine the proportion of albumin and sugar in the urine rapidly and readily with approximate precision.

Gas Cysts in the Abdomen.—Cristol and Porte report a case in which an emergency laparotomy was required for sudden intense abdominal pain and vomiting of bile; pulse 100; the abdomen distended with gas. The dilated stomach reached to the pubis, and puncture released gas and 4 liters of a blackish fluid. The mesentery was found studded with small gas cysts and it had strangulated the bowel close to the pylorus. Almost the entire mesentery was studded with thousands of these pearly cysts of different sizes. The abdomen was merely sutured, but the admission of air seems to have been responsible for the subsidence of the cysts, as there have been no further symptoms since. The woman's health has been apparently perfect during the year to date.

Progrès Médical, Paris

Oct. 18, 1919, **34**, No. 42

*Recent Progress in Intestinal Pathology. J. Carles.—p. 413.
Tuberculin and Serotherapy in Pulmonary Tuberculosis. J. Bertier.—p. 416.

Recent Progress in Intestinal Pathology.—Under the heading "Lessons Learned from the War," Carles expatiates on the precision in the differential diagnosis of pathologic conditions in the intestines which is one of the acquisitions from the war. Cultures from the stools, serodiagnosis, rectosigmoidoscopy, analysis of the products of digestion in the stools, determination of the intestinal flora and parasites, and radioscopy—these supplement clinical examination and have become routine procedures. They reveal the nature of the enteritis and whether it is recent or the remote result of some extinct infection which has left merely what he calls a sympathosis or an enteroneuritis.

Nov. 22, 1919, **34**, No. 47

*Epiploitis. A. Aimes.—p. 465.
*Retinitis in Diabetics. A. Cantonnet.—p. 468.
Morbid Timidity. R. Benon.—p. 469.

Omentitis.—Aimes reviews the literature on acute and chronic epiploitis, including several publications in THE JOURNAL and large numbers of theses.

Retinitis in Diabetics.—Cantonnet comments on the frequent coincidence of chronic nephritis and diabetes, and the

predominance of the symptoms of one or the other. In Onfray's twenty-four cases of retinitis in diabetics, the kidneys were apparently normal in 20 per cent. while in 50 per cent. there was evidence of incipient Bright's disease, and in 20 per cent. there was azotemia. An exact diagnosis is a guide to effectual treatment.

Nov. 29, 1919, **34**, No. 48

*The Blood Pressure in Psychoses. J. Euzière and J. Margarot.—p. 477.
*The Sacro-Iliac Articulation. R. Pilatte and H. Vignes.—p. 479.
Sodium Bromid in Pathologic Conditions in the Digestive and Circulatory Apparatus. P. M. Besse and P. Goutzait.—p. 483.

The Blood Pressure in Psychoses.—Euzière and Margarot refer to what they call anxious states in persons without organic lesions. The arterial pressure is often high, rising proportionally to the feeling of distress. Sympathicotony is evident in the more pronounced cases, and this readily explains the high arterial tension by vasoconstriction.

The Sacro-Iliac Articulation.—Pilatte and Vignes discuss the anatomy and physiology of this articulation, and the interpretation of symptoms in case of pathologic changes.

Revue Franç. de Gynécologie et d'Obstét., Paris

September, 1919, **14**, No. 9

*Ovarian Cysts in the Newly Born. P. Gaifami (Rome).—p. 345.

Ovarian Cysts in the Newly Born.—Gaifami's illustrations show the large ovarian cysts in the three infants. They had all died during or soon after birth.

Anales de la Facultad de Medicina, Montevideo

July-August, 1919, **4**, No. 7-8

*Hypertension. H. Vaquez.—p. 421.
*The Cerebrospinal Fluid in Differential Diagnosis. G. Aráoz Alfaro.—p. 469.
*Epinephrin in Treatment of Asthma. Octavio Maira.—p. 515.
*Early Diagnosis of Gastric and Duodenal Ulcer. H. García Lagos.—p. 532.
Influenzal Pneumonia. A. Ricaldoni.—p. 553.

Hypertension.—Vaquez defines hypertension as a blood pressure above 150 or 160 in men and 140 or 150 in women. Age in itself does not entail hypertension; he has one woman patient who is almost a centenarian but her blood pressure keeps below 140. The most effectual remedy for paroxysmal hypertension, he reiterates, is venesection; this permanently reduces the pressure if 700 or 800 gm. of blood are withdrawn. Lumbar puncture has sometimes given good results in treatment of the intense headache from hypertension, but he shares Osler's skepticism in respect to the action of drugs except in transient emergencies.

The Cerebrospinal Fluid in Differential Diagnosis.—Aráoz enumerates the characteristic findings in the fluid in different pathologic conditions and especially in meningeal states of doubtful origin. In one child the somewhat sudden onset of what seemed to be tuberculous meningitis and the early semiunconsciousness suggested a doubt, and under mercurial treatment recovery was soon complete. It was learned later that the father was syphilitic. Another child developed the symptoms of tuberculous meningitis but the lumbar puncture fluid showed high proportions of albumin and urea, and the child improved under treatment to such a degree that the diagnosis was rendered uncertain. The urine and eye findings were normal. Two weeks later the headache returned with convulsions, and the puncture fluid then showed 7.4 per thousand chlorids and 3.45 urea, and necropsy disclosed tuberculous pyelonephritis but no meningeal lesions. Otitis is often misleading, but the lumbar puncture fluid will exclude meningitis, and when the ears are drained the meningeal symptoms may subside.

Epinephrin in Asthma.—Maira reiterates that many years of experience have convinced him that epinephrin is the treatment *par excellence* for combating attacks of asthma. These patients stand large doses. One had suffered from asthma for fifteen years when subcutaneous injections of epinephrin were begun in 1914, with prompt relief for several hours. The dose was 15 drops, and it was repeated twice and sometimes three or four times a day. This has been kept up for five years, with more than 300 injections, and no by-effects have been observed. Maira has seen nothing to indicate that epinephrin brings on arteriosclerosis when given by subcutaneous or intramuscular injection. The latter is preferable when rapid action is desired. He has obtained good results with it also in whooping cough.

Early Diagnosis of Gastric and Duodenal Ulcers.—García emphasizes that it is the succession of the symptoms, their occurrence through weeks, their connection with the meals, and the possible remissions—up to ten years in one of his cases—that give the clue before the classic triad of symptoms of ulcer develop. The symptoms differ in different patients but the attacks in the same patient are almost all alike.

Archivos de Ginecopatía, Obstet. y Ped., Barcelona

August, 1919, **32**, No. 8

*Treatment of Epidemic Poliomyelitis. F. Vidal Solares and J. F. Ayguavives.—p. 177.
*Acute Rheumatism in Children. Joaquín Puchades.—p. 188.

Treatment of Epidemic Poliomyelitis.—Vidal and Ayguavives wait for the acute phase to be over, and then give hypodermic injections of strychnin plus application of electricity. This seems to ward off the atrophy of the muscles. They test the child's susceptibility to the strychnin with 0.25 mg. first. If this does not induce trismus, they increase by the same amount until the child is getting 1 mg. in this way, which is kept up for five days. At the seventh day they give 0.5 mg. and increase in a week to 1.5 mg. This is kept up for ten days if no signs of intoxication are evident. At the twenty-third day the drug is suspended for two weeks but the electric sittings and massage are continued. It is then resumed. Two cases are described. One child of 3 is now walking well after 125 injections of the strychnin; the other child of not quite 2 shows great tendency to improvement after six months of the faradic current, then, after this, galvanic sittings, and the injections of strychnin.

Acute Rheumatism in Children.—Puchades comments on Langmead's examination of 2,556 schoolchildren at London for signs of rheumatism. The findings were positive in 5.20 per cent. of all the children, and 87 per cent. with positive findings had some heart lesion, although all of the children examined were supposedly healthy, and no precautions to guard the heart were being taken. Hence Puchades emphasizes that rheumatism is far more prevalent among children than is generally recognized, and that when a child has acute rheumatism, repose afterward should be enforced for a much longer period than the stay in the public hospital. The child should not be allowed to go home as soon as the acute phase is past as the heart may become irreparably damaged, if further repose is not enforced. The rheumatism may develop insidiously and not be recognized in time to ward off damage by appropriate treatment. Medical school inspectors should be on the alert to detect the disease in its incipiency.

Gaceta Médica de Caracas

Sept. 30, 1919, **26**, No. 18

*Appendicitis. L. Razetti.—p. 187.
Hydatid Cysts in Venezuela. F. A. Risquez and others.—p. 190.
Importance of Elimination in Therapeutics. F. A. Rizquez.—p. 192.

Appendicitis.—Razetti remarks that acute appendicitis is extremely rare in Venezuela while chronic appendicitis is very common. He describes his mode of procedure in such cases.

Medicina Ibera, Madrid

Nov. 15, 1919, **9**, No. 106

*Albee's Operation in Pott's Disease. T. R. de Mata.—p. 117.
Prophylaxis of Tuberculosis on Ships. Medardo Rivera.—p. 123.

Albee's Operation for Vertebral Tuberculosis.—De Mata is convinced that the implant made according to Albee's technic heals in place just as a simple fracture of a long bone heals. His roentgenograms have confirmed this, as also his clinical experience. The Albee method seems better adapted for the poor. For those who can spare the time, he prefers heliotherapy and other medical measures, although

his experience with it in thirty-five cases has been absolutely favorable. The interval since has been over four months in thirty of the cases. One man required a new operation six months later as the implant had fractured at the vertex of the kyphosis. The broken off fragment had become necrotic, but all the rest formed a solid living whole with the spine, and a second small implant restored clinically normal conditions. The reappearance of pain testifies to fracture of the implant. Two of his patients had paraplegia from compression, and this has not been modified in any way by the implant. The article is illustrated.

Prensa Médica Argentina, Buenos Aires

Oct. 20, 1919, **6**, No. 14

*Action of Snake Venom on Coagulation of the Blood. B. A. Houssay and A. Sordelli.—p. 133.
Chorea. Camilo Muniagurria.—p. 133. To be cont'd.
Tuberculin Inunctions in Prophylaxis of Tuberculosis. S. de Madrid.—p. 139.
The Arrhythmias. P. M. Barlaro.—p. 140. Cont'n.

Action of Snake Venom on Coagulation of the Blood.—In the course of their years of research on snake venoms, Houssay and Sordelli found that all of the twenty-two venoms investigated destroyed the cytozym in the blood, that is, the substance which combines with the serozym and calcium to form thrombin. With the cytozym destroyed, no thrombin can form, and hence there can be no coagulation. This is the case with cobra and certain other venoms, but the lachesis and crotalus venoms (Argentine species) possess a special coagulating property which coagulates even citrated blood. Their research has demonstrated further an extremely active precipitation of fibrin under these latter circumstances, as if to protect the erythrocytes with a varnish of fibrin against the active coagulating agent circulating in the blood. This protecting mechanism of temporary defibrination is interesting from the standpoint of the phenomena of immunity, they add.

Revista Española de Medicina y Cirugía, Barcelona

October, 1919, **2**, No. 16

*Pregnancy in Double Uterus. Alvaro Esquerdo.—p. 533.
*Preventive Vaccination Against Influenza. A. Salvat.—p. 538.
Spontaneous Rupture of the Aorta. A. Aguilar Feliu.—p. 542.
*Drainage of the Bile Ducts. E. Ribas y Ribas.—p. 546.

Pregnancy in Double Uterus.—Alvaro Esquerdo's patient had pains in the lower abdomen after an apparently normal rapid delivery, and a tumor was palpated. It was assumed to be a large fibroma until puncture a month later released thick black blood, and the diagnosis was changed to sarcoma. The laparotomy revealed accumulation of blood in the right half of a double uterus and prompt recovery followed panhysterectomy. He has encountered a number of cases of double uterus with hematometra, once in a virgin. With anomalies of this kind there are usually other malformations, so that panhysterectomy is generally advisable on account of the special tendency to complications. However, he adds, if the hematometra in the double uterus can be correctly diagnosed and amply drained without operative intervention, this might be tried to begin with.

Preventive Vaccination Against Influenza.—Salvat published in 1918 his successful vaccination of 4,900 Spanish subjects none of whom developed fatal influenza thereafter, but five had severe complications in a group of fifty English subjects vaccinated at the same time. He theorizes to explain this difference in the two groups, and claims priority for this prophylactic vaccination to ward off grave complications.

Drainage of Bile Ducts.—Ribas analyzes his 118 gallstone operations, and commends his practice of draining whenever the symptoms seem to come from the gallbladder alone, unless there is merely one gallstone.

Revista Española de Obstet. y Ginecología, Madrid

July, 1919, **4**, No. 43

*Cancer of the Mamma. Victor Conill.—p. 289.
Trophic Function of the Connective Tissue of the Ovum. M. Sánchez y Sánchez.—p. 293.
Histology of Mucosa in Endometritis. A. Mora and C. Gil.—p. 296.

Cancer of the Mamma.—Conill describes and commends his method of systematic roentgen, radium and chemical treatment applied after excision of a cancer of the breast. The colloidal metals by intravenous injection multiply the action of the radiotherapy as the particles of metal become foci for secondary radiation.

August, 1919, **4**, No. 44

*Manikin to Demonstrate Mechanism of Delivery. J. A. Beruti (Buenos Aires).—p. 337.
*Microbiologic Action of Roentgen Rays. J. M. Vilaplana.—p. 346.
Roentgen Treatment of Uterine Myomas. P. González Duarte.—p. 352.

Obstetric Manikin.—Beruti gives ten illustrations of his obstetric machine which reproduces the mechanism of delivery.

Microbiologic Action of Roentgen Rays.—Vilaplana's histologic research was restricted to female genital organs, human and guinea-pig ovaries, and cancerous cervix tissue, before and after raying. The cancer cells pass rapidly through three phases, first the enlargement of the cells, then their degeneration, without karyokinesis. The degenerative cycle is exceptionally rapid and tenacious. Sarcoma cells are destroyed so rapidly that large amounts of toxins are poured out and may do great damage. In one case of uterine myoma the reaction to raying was so severe that the patient insisted on hysterectomy instead, and the microscope disclosed sarcoma nodules in the fibroma.

Revista de Gyn., d'Obstet. e de Pediat., Rio de Janeiro

August, 1919, **13**, No. 8

Obstetric Manikin. J. A. Beruti (Buenos Aires).—p. 231. See above.
*Pregnancy Pyelitis. J. Adeodato.—p. 245.

Pregnancy Pyelitis.—Adeodato reports four cases from his service at Bahia during the last eight years, but he is convinced that routine microscopic examination of the urine would reveal that pyelitis is far more common than generally supposed. Even when fever and pains attract attention they are liable to be attributed to other causes, and as the pyelitis is generally thrown off after delivery, it escapes detection. In two of his cases the disturbances had been ascribed to malaria, and the patient was about to be stuffed with quinin when the microscope revealed the true state of the matter. If the pyelitis is not recognized, it may become aggravated by treatment on a mistaken basis, and be forced into a chronic phase or at least into conditions favoring return at each pregnancy.

Revista Medico-Cirurgica do Brazil, Rio de Janeiro

July, 1919, **27**, No. 7

*Blocking the Nerves for Operations on the Limbs. Alvaro de Figueiredo Guião.—p. 231.

Blocking the Nerves for Operations on the Limbs.—Alvaro de Figueiredo gives minute directions for blocking the various trunk nerves, and states that in his experience healing afterward was normal and there was no special tendency to nervous disturbances. The great drawback to local anesthesia is the dread and worry from the sight of the operation, but two or three whiffs of ether put an end to this. He gives the details of ten cases to demonstrate the great advantages of regional anesthesia for both children and adults.

August, 1919, **27**, No. 8

*Isolation of Lepers. E. Rabello and Silva Araujo, Jr.—p. 271.
*Hemorrhagic Purpura. Cardoso Fonte.—p. 281.

Isolation of Lepers.—This is a committee report on the question whether it is advisable to leave lepers in their homes under special surveillance or to segregate them. In Norway both systems have been followed, the report states, and the number of lepers has dropped from 3,000 to 285 in fifty-seven years. But analysis of these statistics shows that the decline closely parallels the increasing numbers of cases that were isolated. In Norway, besides, the central government has control over the whole country, and uniform measures of surveillance could be applied. The report emphasizes that conditions in Brazil are very different from this, no uniformity in the twenty different states of Brazil being pos-

sible under existing conditions. Hence segregation is the only practicable system for prophylaxis of leprosy. But the committee urges that the leper colonies should be attractive and easy of access to the lepers' friends.

Hemorrhagic Purpura.—Cardoso relates that the first of his two recent patients with hemorrhagic purpura was a man of 31. This is the only case in his experience with recovery after hematuria. The second case was in an infant, 6 days old, and the child died in a week, notwithstanding energetic treatment. Other members of the family showed signs of inherited syphilis, and specific treatment had been pushed but the child succumbed before its effect had had time to become manifest.

Revista de Medicina y Cirujía, Caracas

May 31, 1919, **2**, No. 14

*Urinary Calculi. J. B. Ascanio-Rodriguez.—p. 293.
*Syphilitic Disease of the Heart. Ignacio Benitez.—p. 301.
Acute Pulmonary Edema. B. Perdomo Hurtado.—p. 308.
*Ocular Hyperemia and Menstruation. J. M. Espino.—p. 311.

Urine Factors in Pathogenesis of Calculi. — Ascanio-Rodriguez insists that urinary calculi require certain conditions for their development: The urine has to be alkaline before phosphate concretions can form; and it has to be extremely acid for urate concretions. He refers further to the hyperacidity of the soil and the hypo-acidity of the excretions in the uric acid diathesis, while the reverse is the rule in conditions such as scrofula. By modifying the reaction of the urine, therefore, conditions are brought about which directly favor or annul the tendency to formation of concretions, and aid in the dissolving of the concretions already formed. Analysis of the urine is the guide, and will warn of incipient lithiasis in time to ward it off. He gives no details of treatment along the lines he thus suggests.

Syphilitic Disease of the Heart.—Benitez describes the pathologic anatomy of syphilitic lesions in the heart, saying that the coronaries usually feel the effect first.

Ocular Hyperemia and Menstruation.—Espino describes the case of a healthy married woman of 28 who for the last three years has had severe congestion in one or both eyes just preceding and during her menstrual periods and never at any other time. There is slight photophobia but no pain, secretion or lacrimation.

Revista de Medicina y Cirugía, Havana

Oct. 10, 1919, **24**, No. 19

*Mixed Tumors of Salivary Glands. Elpidio Stincer.—p. 477.
*Asthma in Child. M. A. de Villiers.—p. 481.

Tumors of Salivary Glands.—Elpidio Stincer reviews his experience with 9 mixed tumors of the salivary glands. In 4 there was sarcomatous tissue and one was of endothelial nature mostly; 2 were adenocarcinomas. All but 2 were in the parotid gland, and all were on the right side. The duration of three to thirteen years suggests the mixed type; cases of ten, twenty and thirty years' standing have been recorded. These tumors are generally encapsulated and recurrence need not be feared when removed early.

Asthma in Child.—The girl of 9 was of the lymphatic temperament, but healthy, and she had a severe attack of asthma for the first time last July. It lasted for two days and then subsided without leaving a trace. In August, after exposure to rain, intense asthma developed, with severe cardiovascular complications, weak and rapid pulse, cyanosis and extreme prostration. Epinephrin, camphorated oil, revulsion with mustard baths, etc., finally reduced the severity of the symptoms, and the temperature which had gone up during the day returned to normal and by the third day from the exposure there were no further symptoms. The child has had no return of them since.

Revista de Medicina y Cirugía Prácticas, Madrid

October, 1919, **125**, Nos. 1573-1576

*Salpingitis and Neoplasms with Prolapse of the Uterus. Alvaro Esquerdo.—p. 5.
*Technic for Administration of Digitalis. A. Espina.—p. 81. Conc'n.
*Progressive Muscular Atrophy. R. del Valle y Aldabalde.—p. 122.

Salpingitis and Neoplasms with Prolapse of the Uterus.—Alvaro Esquerdo has had two cases in which gangrene developed in the prolapsed uterus and part of the vaginal walls; in one of the cases he succeeded in arresting the gangrene, with recovery, but the other woman died from peritonitis. In three other cases the prolapse was strangulated, but reduction proved possible in time. He warns against attempting a vaginal operation if there is any question of complicating salpingitis or tumor. For one reason, because removing the uterus would open the way for hernia of intestines. Another reason against it is the risk of hemorrhage from the inflamed and congested tissues. A third reason is the danger of cutting the bladder, rectum, or ureters as these organs are pulled out of their normal places. The suppurating adnexa can be drained by posterior colpotomy, but conditions otherwise should be corrected by way of the abdomen. Subtotal hysterectomy is preferable for obvious reasons, he reiterates.

Digitalis.—In this study of the technic for administering digitalis, Espina remarks that the most difficult point is to know when and how to stop it. The urine and the pulse form the gage for this. He advises to give digitalis only with the finger on the pulse, the ear over the heart, and watching the patient's aspect.

Progressive Muscular Atrophy.—Del Valle reports pronounced improvement in the case of progressive muscular atrophy in a man of 46 under electricity and hot sand baths twice a day. The best results were noted when the sand bath just preceded the faradization. The impotence of the hands from the muscular atrophy retrogressed under this mixed treatment in five months to such a degree that further treatment was not required. He was a workingman, and the first symptoms had been noted three years before. Repeated chilling of the hands was the only causal factor that could be discovered, and this suggested the advisability of the hot sand baths. The advantages of the sand bath are the unusually high temperature that can be used, the fact that perspiration can proceed unhindered, and that there is no maceration of the skin. No benefit was apparent from a course of strychnin, and it was abandoned.

Revista Médica del Uruguay, Montevideo

August, 1919, **22**, No. 8

*Gouty Rheumatism. Carlos Butler.—p. 579.
*Puerperal Thrombophlebitis. J. M. Estapé and Collazo.—p. 589.
*Spontaneous Rupture of Uterus at Term. A. Curbelo Larrosa and H. García San Martin.—p. 615.
*Gold Reaction in General Paralysis. A. Prunell.—p. 620.
*Herpes Zoster. J. Servetti Larraya.—p. 635.
*Slow Pulse with Appendicitis. Carlos Stajano.—p. 640.
*Temporary Tubal Sterilization. Augusto Turenne.—p. 645.

Gouty Rheumatism.—Butler's patient is a well-to-do man of 55 with rheumatism in the shoulders which yielded to potassium iodid and dieting. For some years there had been pains in the sacrum and the roentgen rays revealed a huge tophus. There were also small tophi in other bones and joints, confirming the case as one of gouty rheumatism. In true rheumatism the condensing osteitis casts a heavier shadow than normal, while in gouty rheumatism the shadow of the tophi is much lighter than usual, the urates which have taken the place of the calcium salts being comparatively translucent. The apparent loss of substance in the sacrum measured 6.5 by 7 cm.

Puerperal Thrombophlebitis.—Estapé and Collazo comment on the difference in the prognosis according as the thrombophlebitis is of septic or aseptic nature. All parturients should be systematically examined for any rise in the rectal temperature and for any signs of phlebitis in the genital sphere, while the pulse should be taken every eight hours. When the rectal temperature runs up in waves but no cord can be palpated in the pelvis, although the pulse shows steps of acceleration and there are chills and other symptoms of thrombophlebitis and even of phlegmasia alba dolens, the phlebitis is probably located in muscle or the viscera at some distance. When the cord can be palpated in addition, septic puerperal thrombophlebitis is probable and the outlook is grave on account of complications unless a ligature is applied

early. An aseptic phlebitis does not have the rise in the rectal temperature although the pelvic cord, the pulse, varices and the atony of the uterus are otherwise the same, but the prognosis is benign. The progressive septic form has, in addition, slight edema and formication in the members. The outlook is grave with this, even after the ligature. The complications may be biologic from infection of the thrombus, or mechanical from its extension or fragmentation. They give the details of three cases; in two there was double phlegmasia alba dolens and one of these women was left with complete functional impotence of the legs. The septic uteropelvic thrombophlebitis was confirmed by the laparotomy, and ligation of the hypogastric vein on both sides and also of the utero-ovarian vein on the left side arrested the process. The first symptoms had been noted twenty-two days before the operation, but there was no fever for the first ten days, and then only transiently.

Rupture of Uterus at Term.—The rupture was spontaneous and longitudinal but it caused no characteristic symptoms and was only casually discovered. Immediate abdominal cesarean section and subtotal hysterectomy were followed by prompt recovery.

The Colloidal Gold Reaction in the Spinal Fluid.—Prunell analyzes the findings with Lange's reaction in forty-five cases. They were constantly negative in normal cerebrospinal fluid and also in nervous pathologic conditions other than syphilitic, while with general paresis the curve was constantly between 555555 and 455431.

Electric Treatment of Herpes Zoster.—Servetti reports the prompt attenuation of the pain and the disappearance of the eruption in the two cases in which he applied the galvanic current to the region. The positive electrode was placed on the vesicles of the eruption and the negative electrode over the emerging point of the posterior roots of the fourth and fifth intercostal nerves of the right side, increasing from ten to twenty milliamperes, the sitting lasting from twenty-five to thirty minutes daily. The pain was relieved by the first sitting, and the cure was complete by the fifth.

Slow Pulse and Appendicitis.—Stajano emphasizes that in children a slow pulse is a favorable sign as it does not appear until the process is retrogressing. It is followed by progressive improvement. It is rarely observed in adults, and its significance varies in adults.

Temporary Tubal Sterilization.—Turenne has operated in four cases by suturing the fimbriated extremity of the fallopian tube in a bed made for it through an incision 15 or 20 mm. long in the anterior layer of the broad ligament. This leaves the tube freely movable, and does not kink it. Conception can be rendered possible again at any time by a short incision in the tube lower down, and suturing the lips of the incision to the ovary.

Semana Médica, Buenos Aires

Sept. 4, 1919, **26,** No. 36

*Bacteriology of Influenza. J. Destéfano and J. W. Tobías.—p. 249.
*Cyst of the Iris. E. B. Demaria.—p. 266.
Treatment of Influenza. Ricardo Colón.—p. 270.
*Internal Genital Aplasia. D. A. Rojas.—p. 271.
Epithelioma of Upper Jaw. R. Becco.—p. 276.
Intravenous Sugar Treatment of Tuberculosis. V. Delfino.—p. 278.
*Pregnancy Asthma. M. Ruibal Salaberry.—p. 278.
Influenza. Luis Lancelotti.—p. 281.

Bacteriology of Influenza.—Destéfano and Tobías conclude their seventeen page review of the data on record to date by accepting a filtrable virus as the primary cause of influenza.

Cyst in the Iris.—The spontaneous serous cyst in the iris in the case of which an illustrated description is given subsided under bipolar electrolysis.

Atresia of the Vagina.—Rojas explains that atresia of the vagina and internal genital organs generally includes lack of the ovaries also. When there is atresia of the vagina and a rudimentary uterus, there is usually a tendency to menstruation. If the uterus and ovaries are well developed, along with atresia of the vagina, retention of the menstrual flow causes severe disturbances. When an artificial vagina has to be provided, the Baldwin or Abbott method seems preferable as a rule.

Pregnancy Asthma.—Ruibal Salaberry has encountered four cases of pregnancy asthma during the last four years, and he found albumin in the urine and no chlorids as special features of this type of asthma. The farther advanced the pregnancy, the severer the asthma, the greater the retention of chlorids and the more intense the albuminuria and the edema, and the woman weighs more to correspond. The asthma is thus a manifestation of toxic chlorid retention. Treatment to promote elimination of chlorids and prevent their ingestion—that is, theobromin and restriction to water and milk—soon arrests the tendency to asthma.

Sept. 11, 1919, **26,** No. 37

McDonagh's Works on Biology of Venereal Diseases. C. Pillado Matheu.—p. 285.
*Ossification in Laparotomy Incision. A. and A. Gutiérrez.—p. 296.
*Tuberculin in Treatment and Prophylaxis of Tuberculosis. F. Gómez Alvarez.—p. 298.
Modified Lambotte Plate and Screws. J. C. Labat.—p. 304.
Influence of Alcohol as Factor in Tuberculosis. V. Delfino.—p. 306.

Bone Formation in Laparotomy Incision. — Gutiérrez removed the gallbladder through a transverse incision in July, 1917. In May, 1918, the woman returned, complaining of a bulging of the laparotomy cicatrix and some pain in it. The old cicatrix was incised and a bony formation extracted, corresponding to the shape of the cicatrix, with no contact with the ribs. The microscope showed the structure of true bone; the aspect was much like that of a rib.

Tuberculin Treatment of Tuberculosis.—Gómez Alvarez reiterates the advantages of extreme dilution of tuberculin for systematic treatment of tuberculosis. He calls this extremely diluted tuberculin "bacillin," and relates his surprise when infinitely better results were obtained with a much weaker dilution than the one he had been using. Further experience, he declares, and study of the classified card records of his cases have confirmed more and more the correctness of his premises and his methods.

Archiv für Kinderheilkunde, Stuttgart

Nov. 30, 1918, **67,** No. 1-2

*Acute Lymphatic Leukemia in Infants. E. Tancré.—p. 7.
*The Weight and the Resistance to Infection. F. Stickler.—p. 15.
Congenital Atresia of the Isthmus of the Aorta and Mitral Stenosis in Girl of Five. H. Bergmann.—p. 44.
*Individual Isolation as Factor in Prophylaxis of Infections in Institutions. .D. A. Sokolow.—p. 56.

Leukemia in Infant.—The acute lymphatic leukemia had developed in an apparently healthy male infant after a suppurating process at the umbilicus at the age of one month. Necropsy at 4 months revealed intense lymphoid proliferation in all the organs and that all the glands were slightly enlarged although they could not be palpated during life. The skin never showed ecchymoses and suffusions and the case was exceptional further in that no leukocytes but lymphocytes were found in the blood.

Weight and Resistance to Infection.—Stickler analyzes 200 cases of scarlet fever and 500 of diphtheria, recording the severity of the infection and the child's weight in proportion to its height and to the standard weight for its age. The findings were in favor of the thin children, the course and outcome of the diseases being on the whole somewhat more favorable in the children below the average weight.

Individual Isolation in Hospitals.—This long and illustrated article by Sokolow was read at the All-Russian Pediatrists' Congress in 1912.

Correspondenz-Blatt für Schweizer Aerzte, Basel

Nov. 6, 1919, **49,** No. 45

*Sudden Death in Heart Disease. Walter Frey.—p. 1689.
*Lethargic Encephalitis in Switzerland. G. Müller-Bergalonne.—p. 1695.
*Raying after Removal of Cancers. Max Steiger.—p. 1704.

Sudden Death in Heart Disease.—Frey disputes Hering's assertion that auricular fibrillation is the cause of sudden death. This, he asserts, is incapable of causing the sudden arrest of both heart action and respiration which is characteristic of this "seconds-heart death," as it is called when only a few seconds elapse between the first symptoms and

death. He presents arguments to sustain the assumption of a nervous shock affecting functionally the closely connected centers of respiration and circulation. With heart disease, the regulating mechanism for these centers is in an abnormally excitable state, so that there is an excessive reaction to even normal stimuli. He describes how a stimulus emanating from the heart itself may act on these centers, and thus arrest by reflex action both the heart and respiratory functioning. Intracardial increase in pressure may be an important factor in this. Physical exertion is frequently the determining factor; or sudden failure of the contracting power. The latter is witnessed in the sudden death in diphtheria, the relaxation of the heart muscle setting up the reflex inhibition of heart and respiration.

Lethargic Encephalitis.—The case described is said to be the first one of epidemic lethargic encephalitis encountered in Switzerland, but four others have been observed since in the same town (Geneva). The patient was a woman of 28 and the symptoms indicated tuberculous meningitis at first. Necropsy revealed a primary microscopic acute poliencephalitis.

Raying After Removal of Cancer.—Steiger reviews the experiences with cancer at the university clinic for women's diseases at Bern before and during the four years since roentgen exposures after removal of the cancer have been the routine procedure. In a series of 148 cases 1908-1913, only 13 per cent. have been practically cured to date. The survival averaged 12.2 months but the corresponding survivals in the later, rayed series averaged 18.3 months. Fully 90 per cent. of the nonrayed series died and only 4.3 per cent. of the rayed in corresponding periods of time. These and other data confirm the decidedly favorable influence of roentgen exposures after removal of the cancer, and as the technic is being improved, constantly better results are being realized.

Nov. 13, 1919, **49**, No. 46

*Otogenous Osteomyelitis in Children. F. Siebenmann.—p. 1737.
*The Declining Birth Rate. H. Hunziker.—p. 1741.

Fulminant Otogenous Osteomyelitis in Children.—Siebenmann refers to the acute otogenous osteomyelitis of the temporal bone or other bones of the skull, of which he has encountered seven cases, all but one in girls. There had been preceding chronic otitis media in only one case. The onset is stormy in the midst of apparent health or infectious sore throat or bronchitis, with intense earache and high fever, continuous or of a pyemic type. All his seven patients died between the ninth and sixteenth days. Even an early operation in such cases shows places where the destructive process seems to have skipped these points to attack points beyond, but this does not imply a blood-borne origin. The skeleton outside of the immediate region was not involved. Operative measures in his cases were unable to ward off the fatal pyemia, although the focus was excised apparently into sound tissue the fourth or fifth up to the ninth day.

The Declining Birth Rate.—Hunziker's charts show that the birth rate in Switzerland has long been gradually declining, but the drop has been steeper since 1914. Even in 1911, only Spain, Belgium, Ireland, and France had a smaller excess of births over deaths among the twenty-one states in Europe. In Basel the birth rate per thousand was 18.37 in 1914 but only 12.7 in 1917. Hunziker comments that the gravest danger from the declining birth rate is that birth control is not practiced by the feebleminded, the drinkers, paupers and other inferior elements. They breed out of all proportion to the better elements of society. He adds that Greece and Rome owe their fall to the lack of production of new generations of members for the leading classes.

Therapeutische Monatshefte, Berlin

August, 1919, **33**, No. 8

Treatment of Wounds from Pharmacologic Standpoint. III. L. Loewe and G. Magnus.—p. 281.—To be cont'd.
*Treatment of Malaria with Intestinal Complications. H. Wörner.—p. 287.
Floating Kidney and Its Treatment by a System of Gymnastic Exercises. J. Oldevig.—p. 292. Conc'n.
*Influence of Fat-Poor Food on Cholelithiasis. Kirschner.—p. 300; Idem. W. N. Clemm.—p. 302.

Malaria with Intestinal Complication.—Wörner reports considerable experimental and clinical experiences which demonstrated that the elimination of quinin by way of the feces continues for three or four days almost the same whether the intestines are sound or there is dysentery. Hence with dysentery the quinin can be given by the mouth if desired. But with profuse diarrhea, suggesting disease of the small intestine, there seems to be an exaggerated elimination of the quinin through the stools. Consequently parenteral injection of the quinin is preferable under these conditions. The dose of quinin in the cases ranged from 1.2 to 2 gm., given in half gram doses at hourly intervals.

Fat-Poor Diet Invites Gallstone Disease.—Clemm is convinced that a diet with plenty of fat is less liable to be accompanied with gallstones than a fat-poor diet. He remarks that cholelithiasis seems to have become much more prevalent in the last two years.

October, 1919, **33**, No. 10

*Present Status of Intralumbar Therapy Exclusive of Serotherapy. G. Neumann.—p. 369.
*Sterility of Women and Possibility of Therapeutic Aid. A. Sippel.—p. 374.
*Therapeutic Value of Puncture of the Brain. B. Paetsch.—p. 382.
Subcutaneous Administration of Quinin to Children. R. Lange.—p. 384.
Scopolia Poisoning; Two Cases. A. Heffter.—p. 387.

Intraspinal Treatment Exclusive of Serotherapy.—Neumann reviews the present status of intralumbar therapy with physiologic salines, tuberculin, magnesium sulphate, silver salts and ethyl-hydrocuprein. The consensus of opinion in regard to the latter, she says, seems to be favorable. No untoward by-effects were observed in the experience of several, but Landsberger had paralysis of the bladder develop in several of his cases which, although transient, compelled the suspension of the treatment. The indications for it were pneumococcus and meningococcus meningitis.

Treatment of Sterility.—Sippel describes various measures that might be used for correction of mechanical obstacles to the passage of the ovum or spermatozoa into the uterus. A suppurating catarrhal condition in the cervix may impede conception, and disease of the endometrium may prevent the embedding of the ovum. When the fimbriated extremity of the tube has become obstructed, he advises to resect the distal end of the tube and overcast the raw edges with fine catgut to hold the lumen open. Unsuccessful attempts at artificial sterilization have demonstrated that conception is possible with only a fragment of the tube. In conclusion he discusses artificial fertilization, and what he calls war pregnancies, that is, when women who have long lived in sterile wedlock conceive when their soldier husband returns home on a furlough after a long absence. Among the factors which might explain this are the thinness of the women from the war diet restrictions and the chance for any genital inflammatory processes to have healed. We must remember, however, that even when one element is corrected, there may be other inhibiting factors at work.

Puncture of the Brain.—Paetsch comments on the fact that so few think of puncturing the brain for diagnostic and still fewer for therapeutic purposes. He insists that it is much less of an operation to puncture the brain than it is to trephine the skull, and he reports several cases to illustrate the great therapeutic value of the simple procedure. In one case puncture released 35 c.c. of fluid blood and the paresis of the left arm and leg retrogressed. The puncture had been made between the arm and leg centers and the puncture was repeated ten days later at the same point on account of the persistence of headache, choked disk and pulse of 50 or 60. About 36 c.c. of thick blood containing methemoglobin was evacuated and there has been no further trouble since. A tendency to unconsciousness, pulse 40, and frontal headache had been the only symptoms at first, coming on two weeks after a fall. In another case a girl fell down stairs and was unconscious for five days notwithstanding early puncture of the brain. Then the motor region in the other hemisphere was punctured and 56 c.c. of old fluid blood was evacuated from beneath the dura. The condition improved but recovery was not complete until after

another puncture which released merely cerebral fluid. No local symptoms had been evident at any time and the surgeon would not have known where to trephine, while the puncture answered every purpose and undoubtedly saved the child's life. One man presented the symptoms of a brain tumor in 1903 but it could not be localized. Puncture of the right and left frontal lobes and the right cerebellum gave no relief, but puncture of the left cerebellum released 40 c.c. of an amber fluid and all disturbances subsided. They returned again after a few months and again after intervals up to eight years, but each time puncture in the same region seemed to drain the presumed cyst, and all the disturbances disappeared. Paetsch has had two similar cases in wounded soldiers in which each time recovery followed puncture of the brain.

Zeitschrift für Geburtshülfe und Gynäk., Stuttgart

Jan. 25, 1919, **81**, No. 1

*Pregnancy Kidney. K. Eckelt.—p. 1.
*Contracted Pelvis. A. Heyn.—p. 30.
*Toxic Meningitis After Lumbar Anesthesia. E. Bracht.—p. 61.
*The Question of Diabetes and Pregnancy, E. Reinhardt.—p. 81.
Injury of Bladder During Delivery with Contracted Pelvis. E. Reinhardt.—p. 98.
*Cancer of the Clitoris. R. Ederle.—p. 110.
*Osteomalacia. E. Scipiades.—p. 156.

Genesis of Symptoms of "Pregnancy Kidney."—Eckelt reiterates that tests of kidney functioning have conclusively demonstrated that there is no insufficiency of the kidneys with the congested kidney of the albuminuria of pregnancy, and hence its cause must be sought elsewhere than in the kidneys. The dropsy, the hypertony and the visual disturbances which we encounter in the pregnant are to be regarded as independent morbid phenomena for which the gestation process is responsible. They are pregnancy toxicoses like eclampsia, albuminuria, uncontrollable vomiting, etc. In none of the cases on record of the alleged evolution of pregnancy kidney into chronic nephritis is the proof convincing, preexisting kidney disease excluded, or such after intercurrent infectious sore throat; the course traced continuously from the pregnancy kidney to the chronic nephritis, and, thirdly, the diagnosis of nephritis not based merely on the albuminuria but on reliable functional tests. The frequent occurrence of albuminuria in the course of pregnancy testifies that the kidney is often subjected to great strain, and it is possible that repeated damage might in time entail chronic nephritis. With pregnancy kidney no benefit was derived from restriction of water and of salt in the cases described in detail. Any benefit from the restrictions was evidently due to the bed rest enforced along with them. Some toxic change in the structure of the vessels is manifestly the cause of the dropsy and of the higher blood pressure and this, also, is favorably modified by the bed rest. The experiences he relates confirm that even extreme edema and high blood pressure should never decide as to whether the pregnancy should be interrupted or not. He has witnessed both very pronounced borne without harm for mother and child. Even disturbance in vision is not an absolute indication for emptying the uterus. Only when it develops a long time before term is there danger, as a rule, of irreparable damage to the eyes. When it occurs just before delivery, expectant treatment, particularly under supervision of an ophthalmologist, is indicated. In two of the cases he reports, severe retinal changes retrogressed completely after delivery. It seems wisest, on the whole, he adds, with normal renal functioning to accept the eye findings as the guide whether to interrupt the pregnancy or not. If the functional tests, albuminuria, the dilution and concentration properties of the kidney, the residual nitrogen, and the molecular concentration of the blood show reduced functional capacity in the kidneys, then the pregnancy should be interrupted, regardless of whether the kidney is suffering from a pregnancy toxicosis or an actual nephritis.

Contracted Pelvis at the Berlin Charité.—Heyn analyzes the experiences with 311 primiparae with contracted pelvis and 317 multiparae. The mortality was 1.7 per cent. among the mothers and 11.6 per cent. among the children. The outcome among the women taken into the hospital a little before term was almost as favorable as in normal cases. A further advantage of this is that it gives an opportunity to study such cases under safe conditions.

Toxic Meningitis After Intraspinal Anesthesia.—Bracht compares the necropsy findings in one case and the clinical findings in two others with similar cases on record. The microscope confirmed the aseptic nature of the meningitis; death occurred from pulmonary embolism. The symptoms closely resemble those of any meningitis, and delirium alternates with somnolency. The temperature is no criterion. The fluid was clear at first but later opalescent or strongly turbid. The procain-epinephrin solution had been boiled up the night before, and it had probably altered by standing till next day. In conclusion he urges research to distinguish between the symptoms due to irritation of the meninges and the symptoms from direct injury of the nerve substance itself. This might reveal which of the elements of the anesthetic are responsible for the different injuries and permit their elimination.

Diabetes and Pregnancy.—Reinhardt concludes from the three cases he reports and review of the literature that the pregnancy does not necessarily aggravate the diabetes during the first two thirds. But very often the uterus becomes dangerously distended with amniotic fluid, and a large proportion of the fetuses die. After the delivery, the puerperium proceeded approximately normally in his three cases. The diabetes, however, seemed to become graver from the fact of the pregnancy, although it was not allowed to go to term. The pregnancy in itself is a strain for the diabetogenous organs, especially the liver, and acidosis and coma are menacing even after the most cautious induced delivery. The danger of acidosis grows greater the longer the pregnancy lasts, and when coma has once developed we cannot control it. Hence he advises not to wait too long before emptying the uterus.

Primary Carcinoma of the Clitoris.—The carcinôma had developed on the basis of a papilloma of fifteen years' standing, and it was eradicated with the cautery. Ederle reviews the publications on these growths, showing a percentage of about 16 per cent. clitoris cancers among 677 vulvar cancers. Ederle has compiled a total of 182 cases of clitoris cancers; in 64 they were restricted exclusively to the clitoris. Among the patients 0.3 per cent. were under 20 and 4.4 per cent. between 20 and 30. Pruritus is usually the first symptom. He compares the glandular involvement, etc., with those of other cancers in the genital organs, and remarks that roentgen therapy does not seem to offer any prospects of success with vulvar cancers.

Osteomalacia.—Scipiades devotes seventy pages to this account of his experimental and clinical research on internal secretions as affecting osteomalacia. It has convinced him that the thymus is responsible for the processes which induce human malacia. All influences which induce an intensive accidental pathologic involution of the thymus gland entail osteomalacia, especially when followed by a rapid succession of pregnancies without corresponding pauses for lactation and involution of the thymus. The thymus etiology does not conflict with but throws more light on the data already accumulated in regard to osteomalacia.

Hygiea, Stockholm

Nov. 30, 1919, **81**, No. 22

*Relations between Pregnancy and Pulmonary Tuberculosis. E. Lindhagen.—p. 897.

Relations Between Pregnancy and Pulmonary Tuberculosis.—Lindhagen has witnessed in three cases the whipping up of pulmonary tuberculosis into a fulminant form after a childbirth, as he describes in detail. He also cites similar experiences published by veterinarians in regard to goats and other domestic animals. The curves from his three cases show the almost immediate rise of the temperature after the delivery, and the close succession of peaks to the fatal outcome in one, two and six months.